

MAY 21 1924

Medical Lib.

Registered at the G.P.O., Sydney, for Transmission by Post as a Newspaper.

Published Weekly.

Price 1s. 6d.

# THE MEDICAL JOURNAL OF AUSTRALIA

VOL. I.—11TH YEAR.

SYDNEY: SATURDAY, APRIL 19, 1924.

No. 16.

## Surgical Instruments

We are pleased to announce that good general stocks of our Surgical Instruments have arrived and that regular supplies are now coming forward. Members of the Profession are cordially invited to visit our Show Rooms.

### Allen & Hanburys (Australasia) Ltd.

Instrument Makers to H.M. Army and H.M. Navy

AUSTRALASIAN BRANCH:

**B.M.A. BUILDING : Elizabeth Street, Sydney**



## The "Hornsby" Bedroom

One of our delightful new models, at an exceptionally moderate price.

The design has been conceived in a broad, dignified spirit and the construction ensures long wearing qualities and enhances the value of a very beautiful suite.



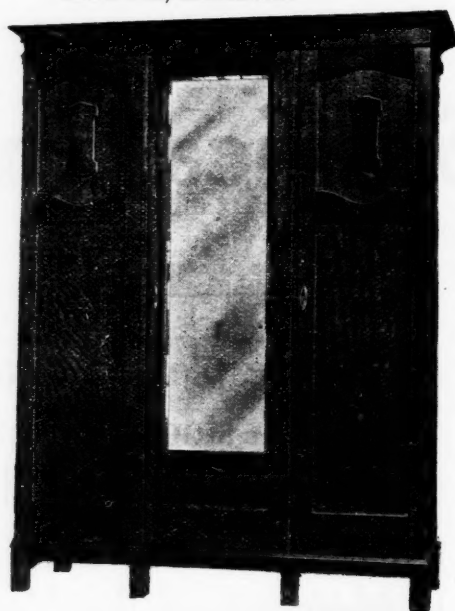
G1/295. 3 piece Bedroom Suite in Figured Oak or Maple, fumed and waxed.

**£39: 15: 0**

5 ft. Wardrobe, two-thirds hanging space with brass rod for coat hangers and shelf for hats, one-third trays and shelves.

3 ft. 6 in. Dressing Table with three deep drawers.

Any piece may be obtained separately.



Pedestal Cupboard to match.



G7/221. 4 ft. 6 in. Figured Oak or Maple Bedstead to match with iron angle irons.  
£6/10/-

**Beard Watson & Co. Ltd.**  
GEORGE STREET, SYDNEY.

# THE MEDICAL JOURNAL OF AUSTRALIA

VOL. I.—11TH YEAR.

SYDNEY: SATURDAY, APRIL 19, 1924.

No. 16.

## Table of Contents

ORIGINAL ARTICLES—	PAGE.	BRITISH MEDICAL ASSOCIATION NEWS—	PAGE.
"Historical Notes: A Comparison of Two Annual Lists, those of 1827 and 1832, from Brisbane Hospital Records," by E. SANDFORD JACKSON, M.B., Ch.B. . . . .	381	Scientific . . . . .	398
"The Surgical Anatomy of Acute Appendicitis," by H. C. RUTHERFORD DARLING, M.D., M.S., F.R.C.S. . . . .	385	Medico-Political . . . . .	400
		Nominations and Elections . . . . .	400
REPORTS OF CASES—		MEDICAL SOCIETIES—	
"Unusual Combination of Pathological Lesions in an Infant," by ROBERT SOUTHEY, M.D., B.S. . . . .	391	The Alfred Hospital Clinical Society . . . . .	400
REVIEWS—		PUBLIC HEALTH—	
Medicine . . . . .	392	New South Wales . . . . .	401
Psychiatry for General Practitioners . . . . .	392	CORRESPONDENCE—	
Reproduction . . . . .	392	William Macewen . . . . .	402
LEADING ARTICLES—		Venereal Disease . . . . .	403
The Industrial Clinic . . . . .	393	Adenoma Sebaceum . . . . .	403
CURRENT COMMENT—		The Medical Benevolent Fund of New South Wales . . . . .	403
Placenta Accreta . . . . .	394	OBITUARY—	
The Position of the Appendix . . . . .	395	Alfred William Rinder . . . . .	403
ABSTRACTS FROM CURRENT MEDICAL LITERATURE—		Vincenzo Marano . . . . .	404
Physiology . . . . .	396	NAVAL AND MILITARY—	
Biological Chemistry . . . . .	397	Appointments . . . . .	404
		MEDICAL APPOINTMENTS . . . . .	404
		MEDICAL APPOINTMENTS VACANT, ETC. . . . .	404
		MEDICAL APPOINTMENTS: IMPORTANT NOTICE . . . . .	404
		DIARY FOR THE MONTH . . . . .	404
		EDITORIAL NOTICES . . . . .	404

### HISTORICAL NOTES: A COMPARISON OF TWO ANNUAL LISTS, THOSE OF 1827 AND 1832, FROM BRISBANE HOSPITAL RECORDS.<sup>1</sup>

By E. SANDFORD JACKSON, M.B., Ch.B. (Melbourne),  
Brisbane.

THE medical establishment which came into Moreton Bay with Oxley in 1823, participated in the general move from Redcliffe to the present site of Brisbane. This began in the first week of December and was complete by February, 1825.

Some time, then, between December, 1824, and February, 1825, it may be said that the Brisbane Hospital was begun on the present site of the Supreme Court in George Street. Here doubtless they began under canvas and as time went on the canvas gave way to buildings of brick and mortar.

In the years that followed, there grew on this site a big hospital overlooking the river. The records in the possession of the hospital show that the authorities must from the first have been hard put to it to find accommodation for all those who needed it. The first available annual record of patients admitted is that between December 25, 1827, and December 24, 1828. A copy of this return will be found in Table I.

<sup>1</sup>Read at a meeting of the Queensland Branch of the British Medical Association on February 7, 1924.

Among the interesting things recorded in it are the following:

There are twenty-seven case of *febris intermittens* and one hundred and sixty-one recorded under the general name of *febris*. I have satisfied myself that both these groups were intermittent fever. The absence of mortality in both precludes typhoid fever.

There were seventy-eight cases recorded under the name phlogosis or phlegmon. Phlogosis means "burning heat" and all these patients were, in my opinion, suffering from erysipelas of the superficial kind. A few of them might, perhaps, have been affected by cellulitis. None of them died.

Under the heading of ophthalmia there were two hundred and thirty-one cases. One hundred and sixty-one of the patients were discharged during the year, leaving seventy in hospital on the Christmas morning of 1828. There are in the record books of the hospital monthly reports of hospital furniture. It is in evidence that in the same year the total stock of towels was fourteen! The paucity of towels indicates a fruitful source of contagion for this disease.

Under the head of pneumonia twenty-six cases are recorded with a total mortality of three, a proportion of the total which is not unusual even in these days.

TABLE I.  
ANNUAL RETURN OF DISEASES TREATED IN HIS MAJESTY'S GENERAL HOSPITAL AT MORETON BAY SETTLEMENT,  
BETWEEN DECEMBER 25, 1827, AND DECEMBER 24, 1828.

Disease.	Remaining in Hospital, December 25, 1827.	Admissions during Year.	Dis- charges.	Deaths.	Remaining in Hospital, December 24, 1828
<i>Febris intermittens</i>	—	27	21	—	6
Febris	2	161	148	—	15
Phlogosis, Phlegmon	1	78	68	—	11
Paronychia	—	13	12	—	1
Ophthalmia	—	231	161	—	70
<i>Cynanche tonsillaris</i>	—	5	5	—	—
Pneumonia	—	26	23	3	—
Phthisis	—	2	1	1	—
Pleuritis	—	2	2	—	—
Enteritis	—	2	2	—	—
Hepatitis	1	10	11	—	—
Rheumatismus	—	40	34	—	6
Orchitis	—	2	2	—	—
Hæmoptysis	—	2	2	—	—
Hæmorrhosis	—	5	5	—	—
Catarrhus	—	18	18	—	—
Dysentery	4	72	61	8	7
Paralysis	—	2	2	—	—
Dyspepsia	—	1	—	1	—
<i>Tetanus traumatica</i>	—	1	—	1	—
Colica	—	32	27	—	5
Diarrhœa	—	20	10	4	6
Debilitas	—	23	16	—	7
Anasarca	—	2	1	—	1
Œdema	—	4	3	—	1
Syphilis	—	2	2	—	—
Scorbutus	—	2	2	—	—
Obstipatio	—	1	1	—	—
Ischuria	—	1	1	—	—
Contusio	2	16	12	2	4
Vulnus	—	58	53	—	5
Ulcus	—	31	27	—	4
Fracture	—	2	2	—	—
Flagellatio	—	51	40	1	10
Stricture	—	2	2	—	—
<i>Ambustio solis</i>	1	—	1	—	—
Ascites	1	9	8	—	2
	12	956	786	21	161

The total of out-patients who received medical aid was 1922. (This figure obviously records attendances, not individuals.)

The number of cases of rheumatism—forty—is very high. The disease seems to have been more common in those early days than at the present time. I suggest that this is due, probably, to a combination of causes, among which hard work and neglect of dental deficiencies played an important part. Add to this the certainty that the working population were probably clothed for the most part in flannel and the prevalence of rheumatism is not very astonishing.

There were seventy-six cases of dysentery with eight deaths and this points to contamination of the water supply, which was of the most primitive kind.

There was only one case of tetanus, probably the first to occur in a white person in what is now Queensland.

Thirty-two patients were admitted and recorded under the heading of colica, a complaint which was probably of dietetic origin. Possibly a considerable number of these were malingerers.

There were twenty cases of diarrhœa, with a mortality of four. They were probably associated with deficiencies in the water and milk supply.

Note that there were only two cases of syphilis in a total of admissions of 1,050.

There were two cases of scurvy, which were probably those of men admitted after a sea voyage. There was no deficiency in the vegetable supply in the settlement.

There are fifty-eight cases recorded under the heading of *vulnus*, which seems rather large, as also thirty-one cases of ulcer. The latter were probably the result of neglect of small superficial skin injuries and some may have been wilfully produced.

Under the heading of *flagellatio* (flogging) fifty-one cases are recorded; one patient died. Ten of these patients were still in hospital on Christmas Day. It is not to be supposed that these cases were scattered generally through the year, in as much as sometimes a dozen men were flogged in one day.



It seems clear that prior to the date under consideration instructions had been given that every man who was flogged, should be thereafter admitted to the hospital for such medical treatment as might be necessary. This was probably a general order, either from the Commandant of that time in the

Moreton Bay Settlement or a general order from Headquarters in Sydney. It may have been the direct result of that one death from flogging, mentioned in this return.

In connexion with this matter a proclamation is quoted by Stewart Russell. It was ordered therein

TABLE II.  
ANNUAL RETURN OF DISEASES AT HIS MAJESTY'S GENERAL HOSPITAL, MORETON BAY, FROM JANUARY 1 TO DECEMBER, 31, 1832, INCLUSIVELY.

Disease.	Remaining in Hospital, January 1, 1832.	Admitted during Year.	Total.	Discharged.	Died.	Remaining in Hospital, December 31, 1832.
Febris .. .. .	—	7	7	7	—	—
Febris intermittens .. .. .	54	611	665	643	4	18
Typhus .. .. .	—	1	1	—	1	—
Phlegmon .. .. .	2	59	61	58	—	3
Paronychia .. .. .	—	9	9	9	—	—
Ophthalmia .. .. .	2	23	25	23	—	2
Phrenitis .. .. .	—	1	1	1	—	—
Cynanche tonsillaris .. .. .	1	1	2	2	—	—
Cynanche parotidæa .. .. .	—	1	1	1	—	—
Pneumonia .. .. .	—	6	6	6	—	—
Hepatitis .. .. .	—	5	5	5	—	—
Hepatitis chronica .. .. .	—	1	1	1	—	—
Cystitis .. .. .	—	2	2	2	—	—
Orchitis .. .. .	—	5	5	5	—	—
Rheumatismus .. .. .	—	18	18	15	—	3
Urticaria .. .. .	—	3	3	3	—	—
Hæmorrhagia .. .. .	—	1	1	1	—	—
Hæmoptysis .. .. .	—	4	4	4	—	—
Hæmorrhosis .. .. .	—	9	9	9	—	—
Catarrhus .. .. .	1	33	34	32	—	2
Dysentæria .. .. .	6	46	52	45	3	4
Coma .. .. .	—	1	1	1	—	—
Paralysis .. .. .	1	—	1	1	—	—
Hemiplegia .. .. .	—	1	1	1	—	—
Asthma .. .. .	—	2	2	2	—	—
Spasmata .. .. .	—	1	1	1	—	—
Colica .. .. .	—	32	32	31	—	1
Cholera .. .. .	—	1	1	1	—	—
Diarrhœa .. .. .	—	28	28	27	1	—
Debilitas .. .. .	—	18	18	16	1	1
Phthisis .. .. .	—	1	1	1	—	—
Oneirodynia .. .. .	—	1	1	1	—	—
Anasarca .. .. .	1	15	16	16	—	—
Ascites .. .. .	—	2	2	2	—	—
Impetigo .. .. .	—	2	2	2	—	—
Syphilis .. .. .	1	1	2	2	—	—
Icterus .. .. .	—	4	4	4	—	—
Paraphymosis .. .. .	—	2	2	2	—	—
Constipatio .. .. .	—	1	1	—	—	1
Carcinoma penis .. .. .	1	—	1	—	—	1
Amenorrhœa .. .. .	—	1	1	1	—	—
Hydrarthrus .. .. .	—	1	1	1	—	—
Vulnus .. .. .	—	14	14	13	—	—
Fractura basis cranii .. .. .	—	1	1	—	1	—
Vulnus gule .. .. .	—	1	1	1	—	—
Ulcus .. .. .	3	18	21	21	—	—
Fractura costæ .. .. .	—	4	4	4	—	—
Fractura radii .. .. .	—	1	1	1	—	—
Ambustio .. .. .	—	4	4	4	—	—
Excoriatio .. .. .	—	5	5	5	—	—
Flagellatio .. .. .	—	2	2	2	—	—
Punctura .. .. .	—	1	1	1	—	—
Contusio .. .. .	2	28	30	30	—	—
Phyma .. .. .	—	3	3	2	—	1
Vertigo .. .. .	—	3	3	3	—	—
Fistula in ano .. .. .	—	1	1	1	—	—
Stricture .. .. .	—	3	3	3	—	—
	75	1,050	1,125	1,076	11	37

Total number of out-patients (attendances) who received medical aid during above period, 5,423.

that no more than a hundred lashes should be ordered to be given in one day. No offender was to be whipped more than three times for the same offence. That seems to mean that no offender should get more than three hundred lashes. No order for increased labour or other punishment, except solitary confinement, was to be carried into effect without the consent of the medical officer. No number of lashes beyond twenty-five was to be inflicted without the actual presence of the medical officer upon whom devolved the responsibility of deciding how much the bodily strength of the offender could bear without endangering his life. This order was given on October 26, 1830, soon after the death of Captain Logan.

In estimating Captain Logan's responsibility in connexion with the severe discipline for which he was reputed, it must not be forgotten that he was responsible for the welfare of the officers, their wives and children and for the protection of the females—convicts and otherwise—of the settlement. The proportion of bondsmen to that of the military was a very high one and the bondsmen were, we may suppose, of the worst and most incorrigible kind. Without chains and irons for the worst convicts the position of the official class of the settlement would have been a highly precarious one.

The return shown in Table II. is quoted to emphasize the great amount of work done in the hospital in 1832. It will be seen that the total number of admissions to hospital for all diseases was 1,125, actually a greater number than the total of persons in the settlement which another return shows to have been 983. This, of course, indicates that many persons were admitted more than once.

In September of the same year by another return it is learned that there were sixty-nine patients in hospital. This fact is in its way testimony to the short duration of stay in hospital for each patient.

From the report of admissions in 1832 it will be seen that there were an extraordinary number of cases of intermittent fever—665, more than half of the total admissions and approximately two-thirds of the total population. This extraordinary number of malarial infections is, of course, suggestive of an error in diagnosis or nomenclature. The total mortality, four, as in the other return practically excludes typhoid. An examination of records in the same period shows that as a rule the patient was only in hospital a few days. The number is probably not an accurate record of the number of persons under treatment. Many patients suffering from fever were probably admitted more than once during the year and many were out-patients.

The one case of typhus—so-called—was that of a man named Newman. Elsewhere in the same same books the words "*typhus mitior*" are attached to that patient. *Typhus mitior*—the milder typhus—was a name given, as we know, to typhoid or enteric in the first days when physicians began to recognize the difference between typhus and typhoid.

There is in the medical officer's record of treatment a very interesting account of the measures

adopted for the relief of poor Newman. The result is recorded sadly but quaintly in the word "*obiit*"—he died. The symptoms are not recorded, but reading through the lines of treatment we can guess some of them.

To begin with we can see that he was very ill soon after his admission, because on the second day they gave him eight ounces of wine, though he was a bondsman! Further evidence of how seriously they regarded his illness is conveyed by the recorded fact that they increased the wine to twelve ounces next day and continued that amount daily for the rest of his life.

He was constipated, so they gave him calomel and he had a bad headache for which I feel sorry to read that they blistered the back of his neck and glad to see that they applied cold water to his head. But the result—*obiit*—showed that the treatment was in vain.

Here is a sample of a treatment for intermittent fever which I cannot help feeling thankful has gone out of action: Twenty grains of charcoal (wood) every two hours, followed after a couple of days by a decoction of wattle bark every three or four hours, in doses of two ounces! This seems to have been comparatively harmless, however, because after twelve days the patient from whose record I am quoting, was discharged alive! Here was either a great cure or a hardy patient, if the stuff was really swallowed.

To continue the consideration of the list of admissions in 1832. There were of ophthalmia twenty-five cases. The disease was therefore much less in evidence than in 1827. There were on Christmas Day, 1828, seventy patients with ophthalmia "wearying" in hospital—more than double the total number admitted in 1832.

On October 31 in that year there were in the hospital twenty-three small towels and twenty-six round towels. The latter were doubtless the same as those we now call roller towels. Perhaps the increased aggregate in towels in 1832—even though the use of round towels was still permitted—was associated with the decrease in the incidence of ophthalmia.

Of rheumatism there were only eighteen cases in 1832, as compared with forty in 1828. Perhaps there was less overworking of convicts.

Thirty-four cases of *catarrhus* were probably due to a mild influenza.

The record for dysentery—fifty-two cases with three deaths—was still too great, but the water supply from the underground tanks from the lagoon towards the Green Hills was probably at fault.

The methods adopted for the treatment of dysentery were at least in some cases heroic. Here is what they did to one patient. They gave him ten grains of calomel three times a day for two days, then five grains thrice daily for one day. Next day they went back to ten grains daily and continued it for two days. Then the surmise is that symptoms arose which gave

pause to the prescriber. In mongrel French and Latin he instructs the omission of the calomel. And as you read these instructions you may perhaps be tempted to hope that that was an end of the calomel! But it was not! The omission only lasted one day, but the prescriber was getting careful and the next day he ordered only a single dose of ten grains. Then his courage rose again and he went at his patient with ten grains three times daily. Then he switched off on to half an ounce of castor oil. Somewhere here he must have had a glimmering of the uselessness of his method of purgations, for he never repeated them. The patient, however, evidently required something to settle his stomach and so he got a tonic with peppermint in it and after that for a couple of days opium treatment—and Heaven be thanked for it!—some wine. But, *obit!*

There was one case of "oneiro-dynia." A Greek dictionary helped me to find out that that means nightmare! Of this there was only one case. Strange, isn't it? There must have been many uneasy consciences in the settlement and probably plenty of indigestion. Perhaps this particular patient had a deflected septum.

There was one case of *vulnus gulae*. I am sure you all know that means cut-throat and though there is no information on the point we may assume that it was suicidal—at least in intention. Considering all things we might have expected more records under this heading.

We have often read that in Logan's time convicts who desired to terminate their existence, adopted the unusual method thereto of killing a comrade convict in order that they themselves might be hanged. I have always found difficulty in accepting this statement. Suicide must have been more easily accomplished than by that roundabout course. That convicts frequently chose to put an end to the life of a companion in order to end their own is a statement which must be taken with many grains of salt. A little consideration will show that it is unlikely to be true.

It is easy enough to believe that at some time or another such a plea was advanced by a convict murderer in extenuation of his crime, but it is not easy in my opinion to accept such a plea as truth, except from a lunatic. Being once made, however, it is easy to see that it might be frequently used again. Man is an imitative animal!

Upon such evidence of individuals of more than doubtful character and credibility much of Logan's unpopularity is based and his character execrated by the generations that have followed his time.

In 1832 there were only two cases of flogging—a pleasant contrast to 1827! The settlement was seven years old, discipline was not so severe and convicts more settled in mind, whether because they were receiving more lenient treatment or not is left only to conjecture.

The number of out-patients during 1832, 5,423, is obviously a record not of the number of persons under treatment, but of their attendances,

# THE SURGICAL ANATOMY OF ACUTE APPENDICITIS.<sup>1</sup>

By H. C. RUTHERFORD DARLING, M.D., M.S. (Lond.),  
F.R.C.S. (Eng.).

Surgeon, Coast Hospital, Sydney.

EACH year between three hundred and fifty and four hundred deaths are recorded in the Commonwealth of Australia as being directly due to appendicitis and of these 40% occur in New South Wales. In the State the death rate from appendicitis is approximately 6.6 per 100,000 population, compared with 5.4 in Victoria, 7.9 in Queensland, 4.5 South Australia, 7.7 Western Australia and 7.7 in Tasmania.

The vast majority of the patients are young men and women in vigorous health at the time of the attack and it is true to say that not more than 1% would have died if operation had been performed before the appendix had leaked. Collective statistics indicate that the mortality of acute appendicitis under modern scientific treatment still varies from 1% to 15% according to its type. Ninety *per centum* of the deaths from acute appendicitis still result from general peritonitis; in other words the fate of a patient, the victim of acute appendicitis, depends almost entirely upon the skill and promptitude of the medical attendant and any special skill of the surgeon has very little to do with the patient's recovery.

In order to understand thoroughly the symptomatology of appendicitis a working knowledge of the anatomy of this region is essential, more particularly as regards its topography, nervous supply and connexions and its development.

## TOPOGRAPHY.

The familiar McBurney's point was thus first described by its distinguished discoverer: "I believe that in every case the seat of the greatest pain determined by pressure of the finger has been very exactly between an inch and a half and two inches from the anterior spinous process of the ilium in a straight line drawn from that process to the umbilicus. This point indicates the situation of the base of the appendix where it arises from the caecum, but does not by any means demonstrate, as one might conclude, that the chief point of the disease is there." McBurney's point, however, generally corresponds to the median portion of the ascending colon some one and a half inches above the base of the appendix.

Lanz's point which lies over the base of the normally situated appendix, is found by drawing a line between the anterior superior iliac spines, and is situated at the junction of the outer and middle thirds of this line (bispinal line) on the right side. Garau found the base of the appendix in 11% nearer McBurney's point, in 2% the base was midway between the two points and in 87% it was nearer Lanz's point. McBurney's point, however, still retains its value from a symptomatic standpoint.

The normal caecum occupies the triangular space between the iliac vessels and the inguinal (Pou-

<sup>1</sup> Submitted for publication November 23, 1923.



part's) ligament and the direction taken by the appendix is very variable, depending mainly upon the length, consistency and mobility of the meso-appendix. When not adherent the appendix may occupy a number of positions. Lafforgue, for example, found it hanging into the pelvis in 41.5% of two hundred cadavers of all ages and both sexes; pointing towards the spleen in 26%; resting on the iliacus in 17% and retro-caecal in 13%. The positions of the inflamed appendix as exposed by the operating surgeon, however, differ somewhat from these figures; 25% lie in the pelvic position, 11% occupy the splenic position and 14% ascend either lateral or posterior to the caecum, whilst in the remainder the appendix may be said to occupy its normal position in the right iliac fossa.

For all practical purposes it may be said that in one-half of the cases of acute appendicitis the appendix lies in the right iliac fossa and in one-quarter it hangs down into the pelvis. About 2.5 centimetres (one inch) below the ileo-caecal valve the appendix opens into the caecum by a funnel-shaped opening (sometimes a mere slit) which is occasionally guarded by a crescentic fold of mucous membrane, known as *calvula processus vermiformis* (Gerlach's valve). It is by no means constant; for instance Lafforgue observed it but twice in a series of two hundred cadavers. Just at the base of the appendix there is often a thickened band or collar of sub-peritoneal tissue. When the mucous membrane about this point becomes inflamed, the walls very soon are in apposition and the cavity of the appendix is converted into a closed sac. If the inflammation progresses, the organ becomes more and more distended with exudate from the mucous membrane and the increasing pressure of the contents, unless relieved by discharge into the caecum or by perforation, produces local (tension) gangrene.

The appendix is really a degenerated ancestral caecum and its lumen varies considerably, being much greater in young people than in old. Ribbert asserts that the cavity of the vermiform process tends to undergo obliteration; four hundred cadavers were examined and in 25% the process was more or less obliterated. In 50% of the obliterated appendices the distal fourth only and in 3.3% the whole process was a solid cord (obliterative appendicitis).

The normal appendix can be observed by X-ray examination to fill and empty about the same time as the caecum. It may, especially in young people, fill and empty repeatedly whilst the caecum remains full.

#### NERVOUS SUPPLY AND CONNEXIONS.

Each spinal nerve is attached to the spinal cord by two roots, called respectively anterior (ventral) and posterior (dorsal). In their most primitive state spinal segmental nerves arose from the central nervous system by three roots: one anterior motor, one lateral, one posterior and sensory, the lateral root being both motor and sensory. The motor neurones of the lateral root have emigrated from

the central nervous system to form the sympathetic nervous system, whilst the sensory portion of the lateral root has fused with that of the primitive posterior root to form the posterior root as now exists in man. We may, therefore, look upon a spinal nerve as composed of two portions: the splanchnic neurone system and the somatic neurone system, both of which systems comprise receptor, excitor and connector elements. First let us consider a receptor neurone of the splanchnic system.

Haller pointed out many years ago that the intestine was insensitive to such artificial stimuli as pricking, crushing, burning, cutting and touching and it is now known that the normal adequate stimulus of the intestine is an increase in tension which produces fullness, discomfort and finally pain. The localization of this sensation is vague and is usually referred to or about the umbilicus. It must be remembered, however, that in certain cases pressure from without over a portion of inflamed and distended intestine will cause such increased tension as to give rise to increased pain and the site of the visceral disease can be fixed by the touch or pressure sensation of the contiguous parietes. Therefore viscera are capable of giving rise to painful stimuli which are not accurately localized apart from contact with some adjacent tissue possessing powers of localization. This remarkable difference with regard to the response to mechanical stimulation between the external body wall and the intestine brings out clearly the difference in function of the two divisions of the nervous system, a difference which it is necessary to understand clearly if the symptoms of appendicitis are to be rightly comprehended.

Apart from pain, stimulation of this receptor neurone is prone to lead to irritation of the whole neural segment to which it belongs, and the segment then becomes over-susceptible to potentially painful stimuli. In other words painless stimuli from the skin reach those segments of the central nervous system which are directly connected with the intestine and the skin appears to be tender (cutaneous hyperalgesia). In a somewhat similar manner if a peripheral nerve be inflamed, the skin within its distribution may become tender, *exempli gratia* intercostal nerves in acute pleurisy.

Compare cutaneous hyperalgesia with an area of protopathic sensibility (*id est* unguarded protopathic area) which is an area of defective sensibility giving an excessive response (pain) to an adequate stimulus. This response is badly localized and radiates widely over the parts affected. Cutaneous hyperalgesia is tested by gently pinching or stroking the skin with a pin and making out the boundaries of the tender area. Sherrington, on dividing a branch of the celiac plexus going to the bowel and stimulating the central end, secured an immediate contraction of the flat muscles of the abdominal wall. The contraction was abolished or failed to occur when the anterior roots of the spinal nerves were divided.

Now let us turn to the receptor neurone of the somatic system. If we take the abdominal wall we

find that it consists of three strata endowed with exquisite sensitiveness to pain; first the skin, second the flat voluntary muscles and third the layer of loose connective tissue lying immediately outside the peritoneum. The nerve supply of this third layer can in nearly all areas be easily ascertained by anatomical dissection. The subperitoneal tissue of the pelvis is largely due to the fact that stimulation of this structure does not give rise to any clinical localizing signs or symptoms; but it may be assumed on embryological grounds that it is probably derived from the fourth and fifth lumbar and the sacral nerves. The locality of a stimulus (pressure) applied to the subperitoneal layer of the abdominal wall can be appreciated, as can also pain if the pressure be excessive (deep sensibility). The fibres which conduct this deep sensibility, run mainly with the intercostal nerves.

To sum up—pain must be regarded as Nature's peculiar and special way of indicating that her normal functions are being prejudicially or injuriously disturbed and reflex pain is the method of affording a diseased organ protection against external injury by rendering the functional activity of both the skin and the muscle hyperacute.

Mention may here be made of the "antidromal fibres" of Bayliss which are capable of conducting impulses in either direction according to the specific end organs to which they are connected. Some of them conduct centripetally like other afferents and their impulses evoke pain and discomfort; others produce so-called trophic effects in their peripheral distribution which approximately coincides with the segmental arrangement of the hyperalgesic areas of the spinal cord.

It must be remembered that whilst we are reasoning on the assumption that this hypersensitiveness is due to influences exercised in the nerve cells of the cord, the real receptive centres for the sense of pain are, of course, in the thalamus or the post-central gyrus of the cerebral cortex or both and the same hypersensitiveness may under the same conditions be in the cells of the brain. This matter, however, enters into the sphere of the neurologist rather than into the domain of the surgeon; for the further information on this subject the reader is referred to a paper in THE MEDICAL JOURNAL OF AUSTRALIA (August 7 and 14, 1920) by Dr. (now Professor) John I. Hunter: "Abdominal Pain and its Associated Reflex Phenomena."

#### EMBRYOLOGY.

The primitive alimentary canal projects as a simple tubular loop into the abdominal cavity (coelom) from the posterior wall of which it is suspended by the dorsal or primitive mesentery. The free end of the loop (intestinal loop) extends through the widely open umbilical orifice and is connected by the vitelline duct to the yolk sac. The

proximal part of the gut is also connected to the *septum transversum* (diaphragm) and the anterior wall of the body cavity as far caudally as the umbilical orifice by a ventral mesentery. The proximal cephalic or descending limb of the intestinal loop grows more rapidly and becomes convoluted and coiled and forms the jejunum and major part of the ileum. The caecum appears as a diverticulum on the ascending (caudal) loop about the sixth week and the remaining distal portion of this limb forms the ascending and transverse colon.

The final site of the appendix depends on the following factors:

(i.) Rotation of the intestinal loop. A rotation (anti-clockwise) of the intestinal loop together with its mesentery occurs around the superior mesenteric artery as an axis. The result of this rotation is that the original right side of the intestinal loop and its mesentery becomes the left side and the caecum then lies near the middle of the abdomen below the liver (*id est* third month). Subsequently the caecum passes further to the right towards the right kidney pouch.

(ii.) Descent of the caecum from the sub-hepatic position to the right iliac fossa. In process of time the proximal part of the colon becomes greatly increased in length and the caecal diverticulum gradually descends into its permanent position in the right iliac fossa.

(iii.) Secondary adhesions between opposed peritoneal surfaces. The ascending colon and its mesentery now lie against the posterior abdominal wall and the permanency of this position depends on the adhesion of the opposed peritoneal surfaces over a triangular area limited laterally by the lateral border of the ascending colon, inferiorly by the new posterior attachment of the (adult) mesentery and superiorly by the attachment of the transverse mesocolon as far as the duodeno-jejunal flexure.

(iv.) Unequal development of the caecal pouches. Starting as a lateral bud from a straight tube the caecum gradually lengthens and at the same time its axis straightens out with that of the proximal colon, until the entrance of the ileum into the colon becomes rectangular. From an early date the basal (proximal) portion of the caecum continues to develop *pari passu* with the colon, but the remaining four-fifths or distal portion of the caecum—the future appendix—enlarges very slowly, so that during the latter half of foetal life the caecum attains a conical shape, known as the foetal type of caecum. Later on the development of the basal portion is not symmetrical for the growth of the antero-lateral portion is greater than that of the postero-medial and hereby arises the typical adult lopsided caecum. The relative preponderance of the growth of the lateral pouch over that of the medial will determine the distance of the appendicular orifice from the ileo-caecal junction. The differentiation of the appendix from the caecum is due to two factors, first the formation of a continuous longitudinal muscular coat and second the development beneath the mucous membrane of a continuous layer of lymphoid tissue.



It therefore follows that:

(i.) If rotation of the intestinal loop fails to occur, the caecum and appendix will be found in the left lower quadrant of the abdomen, the ileum entering from right to left. The gut may remain in a semi-developed form with no differentiation of ascending and transverse colon or hepatic flexure.

(ii.) If the caecum fails to descend, the appendix is found in the sub-hepatic position, the ileum entering the caecum from below upwards and outwards. This type is frequently associated with undescended testis or ovary.

(iii.) If adhesions begin to form before the descent of the caecum is complete, the appendix is caught up behind the caecum so as to lie in a retro-caecal position and the caecum rolls down anteriorly hiding the base of the appendix.

(iv.) If descent of the caecum becomes excessive before adhesions begin to form, the appendix lies in the pelvic position and the caecum extends to a variable degree into the pelvic cavity.

#### SYMPTOMATOLOGY.

In its early stages appendicitis gives rise to symptoms which are entirely confined to the reflex group, until the inflammation extends to the sub-peritoneal stratum of the abdominal wall. Another series of symptoms then arise; these are produced by a different mechanism and are detected in the immediate region of the inflammation. Inflammation of the appendix in its early stages gives rise to an increased stimulation of the afferent nerves of the sympathetic system passing to the spinal cord. This stimulation affects neighbouring spinal centres and then there occurs a reaction peculiar to the cells stimulated. If the stimulus spreads to the nearest sensory cells of the spinal segment, the pain which results, is referred to the peripheral distribution of the eleventh thoracic nerve. In addition stimulation of this afferent visceral neurone is prone to lead to irritation of the whole neural segment to which it belongs, so that hyperalgesia and muscular contraction of the external abdominal wall result. Hence immediately the appendix becomes damaged by inflammation it becomes protected from external mechanical stimuli by skin and muscles whose functional activity is hyperacute.

#### Reflex or Pre-peritonitic Stage (Stage of Appendicitis Proper).

It must be remembered that the reflex stage may be atypical or abortive in an adherent appendix, damaged by a previous acute attack, or in a retro-caecal appendix. Murphy's well-known quintet of symptoms, occurring in the order of pain, nausea and vomiting, local sensitiveness, elevation of temperature and leucocytosis, is of the utmost importance in diagnosis. Murphy stated: "The symptoms occur almost without exception in the above order and when that order varies, I always question the diagnosis." If fever precedes the onset of pain, if vomiting accompanies or precedes the first bout of pain, it is generally not appendicitis with which we are dealing.

#### Pain.

In most cases the pain is described as being of a dull, cramping or griping character. Generally the pain is at first referred to the umbilical or epigastric region and in twelve or twenty-four hours becomes localized in the right iliac fossa. Before the patient locates the pain in the right iliac fossa, tenderness can almost always be obtained at McBurney's point.

*Initial Pain* (diffuse, paroxysmal or colicky pain referred to region of umbilicus).—Mackenzie believes this pain to be due to the inflamed appendix stimulating the lower end of the small intestine to violent peristalsis. This pain is not infrequently absent when there have been previous attacks of appendicitis; it has been estimated that it is twice as common when there have been no previous attacks.

*Later Pain* (localized continuous pain referred to the right iliac fossa).—Appendicular pain is referred to the anterior division of the right eleventh thoracic nerve and the "maximum point" at which the pain is most acute, corresponds to McBurney's point. In rare occasions this pain is referred to the opposite side (left iliac region), a phenomenon not unknown in kidney (reno-reflex) and in ovarian disease. Why cells of the opposite side of the cord should in certain cases be more readily excited than those on the side of the disease is decidedly puzzling. The only explanation seems to be that as the appendix is originally a part of the large intestine, the tendency is for the pain to be referred (as in disease of the colon) across the hypogastric region and, not being complete in its development, it is only in the two iliac regions that it is felt. The above remarks apply only to appendicular inflammation; appendicular obstruction produces pain of the colicky cramp-like type and unless inflammatory changes ensue, this is unassociated with cutaneous hyperalgesia, pyrexia or any increase in the pulse rate.

#### Nausea and Vomiting.

Vomiting may occur once or twice a few hours after the onset, especially if the attack follows some dietetic indiscretion. In an uncomplicated case no further vomiting should occur. The nausea never precedes the pain. Vomiting depends on the integrity of the vomiting centre in the medulla which is here excited by reflex irritation of the terminations of the vagus nerve supplying the appendix.

#### Local Sensitiveness.

McBurney's phenomenon is probably due to an increased stimulus passing from the appendix to the spinal cord, affecting the neighbouring motor and sensory centres and resulting in a peculiar limited contraction of a portion of the musculature of the abdominal wall and an over-susceptibility of both the cutaneous and muscular layers to potentially painful stimuli, *id est* the "threshold of stimulation" is lowered. Furthermore a similar lowering of the threshold is observed with regard to the local cutaneous reflex. The demonstration of non-

medullated sympathetic fibres to voluntary muscle (Boeke) combined with the recent work of Royle and Hunter on decerebrate rigidity leads us to inquire whether Head's contention, that protopathic sensibility is the primitive form of sensation, is not correct and that cutaneous hyperalgesia and muscular hyperalgesia are not in part sensory and motor phenomena of that part of the sympathetic system supplying the abdominal wall (somatic area).

**Cutaneous Hyperalgesia (hyperæsthesia, viscerosensory reflex).**—Cutaneous hyperalgesia is usually limited to the eleventh right thoracic area of Head and varies from a complete band, about three inches wide, extending from the median plane below the umbilicus anteriorly to the lumbar spines posteriorly down to a circular area the size of a florin, lying supra-medial to McBurney's point. Occasionally the cutaneous hyperalgesia overflows into the tenth or twelfth thoracic areas and on rare occasions it is bilateral. As a rule cutaneous hyperalgesia can only be demonstrated over a triangular area of the anterior abdominal wall (appendix triangle of Sherren) supplied by the anterior rami of the thoracic nerves. It is probably due to the comparatively greater anatomical importance of these rami. Cutaneous hyperalgesia does not vary with the position of the appendix and is present in the vast majority of first attacks of appendicitis. It gradually clears up during convalescence as the other signs of the disease clear up. With perforation or gangrene of the appendix the cutaneous hyperalgesia completely disappears, even though the perforation may be small and the remainder of the appendix not gangrenous.

**Muscular Hyperalgesia (Défence musculaire: Protective Rigidity: Viscero-motor Reflex).**—The extent of the muscular contraction is variable; it is usually limited to a few strands of muscle which may be mistaken for the appendix itself or very rarely may be so extensive that the whole of the right side is hard and board-like. The contracted muscle is extremely sensitive, for in those cases unassociated with cutaneous hyperalgesia, pressure on the rigid fibres is very painful and even the lightest palpation frequently produces a rapid and strong reflex contraction. These contracted fibres are the last portion of the muscular system to yield to the influence of an anæsthetic. As pointed out by Capellen and Mackenzie this sign frequently persists for a month or more after appendectomy; a well recognized clinical phenomenon occasionally annoying to the patient and disconcerting to the surgeon.

#### *Elevation of Temperature.*

The temperature is a character on which considerable stress has been laid, and although some general conclusions may be inferred, yet in many instances it is most irregular and misleading. Burgess even goes so far as to state: "I feel strongly that fewer cases would pass unrecognized in their earlier stages were it to become the universal rule never to take a temperature nor count a pulse in a suspected case of appendicitis. They are only too apt to mislead."

Fever is not present at the commencement of an attack, but nearly always develops within three to twenty hours after the onset of the pain, two or three degrees being the average elevation. In any suspected case the temperature should be ascertained every two hours and if it rise in a gradual manner it is a point in favour of appendicitis.

#### *Leucocytosis.*

Leucocytosis with a greatly increased proportion of polymorpho-nuclear cells is present in about 95% of cases. It is absent in those very mild conditions in which the peritoneal coat is not involved and in fulminating cases when the infection is so virulent that the patient has little or no power of resistance. The presence of a definite leucocytosis, a glycogen reaction and an abnormally high percentage of polymorpho-nuclear leucocytes indicate an inflammatory and probably suppurative lesion and rule out such conditions as abdominal influenza and typhoid.

#### *Latent Period ("Accalmies Traîtresses").*

After the initial reflex upheaval when the pain, nausea and local sensitiveness have subsided or moderated, a period variously termed "the lethal interval" or "the delusive lull" appears. An appendix may be on the point of rupturing into the general peritoneal cavity without a single adhesion to limit the infection and yet the abdominal wall is flaccid and allows of free manipulation without any rigidity appearing.

The patient seems well, but has a distaste for food, his tongue feels dry, his breath is foul and the bowels are constipated. His pulse and temperature, if not quite normal, are so little elevated as to excite no suspicion. This fact is not generally appreciated, nor do the authors of current textbooks of surgery lay stress upon it. In diagnosis this stage is of the utmost importance for the medical attendant owing to the meagre signs and symptoms is apt to think that the patient is improving but for the fact that the abdominal respiratory excursions are diminished and the pulse rate accelerated.

The above phenomena depend on an unruptured, inflamed appendix which is incapable of supplying an adequate stimulus. This may occur early in the disease when the appendix becomes gangrenous or subsequently when the tissues of the appendix accommodate themselves to the increased tension produced by the inflammatory changes.

#### *Perforative Peritonitic Stage of Appendicitis (Symptoms of Local or Spreading Peritonitis).*

A large number of patients with acute appendicitis reach the surgeon after the appendix has perforated at the site of gangrene or a leak has occurred in its walls. Within twenty-four to forty-eight hours of the onset a fresh attack of pain, even more violent and severe than the first, but now definitely localized to the position of the appendix, ushers in acute perforative peritonitis. The occurrence of this perforation is often greatly accelerated by the administration of a purgative. The inflammation now spreads to involve the layer of loose

connective tissue lying immediately outside the parietal peritoneum and the vascular changes *et cetera* associated therewith stimulate the extra-peritoneal nerve endings and lead to well-marked rigidity and tenderness of the abdominal muscles in the immediate region of the inflammation. Persistent definite rigidity must therefore be regarded as a sign, not of appendicitis, but of perforative peritonitis. The intensity of the rigidity depends on the condition of the abdominal muscles and the fatigue of the neuro-muscular reflex. It is only found in the acute stage of parietal peritoneal inflammation and rapidly diminishes as the infection becomes localized.

A tender lump, formed of matted appendix, intestine and omentum, which may or may not contain pus, develops and in addition there will be fever, higher as a rule than before perforation, an accession of pain, a renewal of vomiting and a continued or decided acceleration of the pulse. Finally certain localizing signs occur which vary according to the position of the appendix. As pointed out by Head, inflammation of this extra-peritoneal fatty tissue does not give rise to either referred pain or superficial tenderness of the visceral type.

#### *Iliac Appendix.*

The appendix is most usually found occupying the right iliac fossa in close relation with the psoas, lying along the median border of the caecum and often partially concealed behind the terminal portion of the ileum and its mesentery.

Rigidity of the anterior abdominal wall in the right iliac region, gradually diminishing as the peritoneal reaction becomes limited, is present. There developed a tender lump due either to a matting of omentum *et cetera* by inflammatory lymph or to a localized abscess. A positive result is frequently obtained from the psoas irritation test, *id est* there is a reflex rigidity of the iliopsoas and extension of the right hip joint, as the patient lies on the left side, causes pain to be felt in the iliac fossa. In extreme cases an involuntary flexion of the right hip may be present. Owen's sign may be elicited; thus if firm pressure be made with the hand over the ascending colon, gas is displaced towards the caecum disturbing the inflamed appendix and pain is elicited in the right iliac fossa. A response may be obtained to the femoral test, *id est* compression of the common femoral artery just below the inguinal (Poupart's ligament) causes local pain over the iliac vessels. The increased pulsation of the artery causes increased stretching of the inflamed peritoneum. The genito-femoral nerve may be involved. This is indicated by pain in the right groin passing into the right testicle and with this pain may be associated superficial tenderness over the femoral triangle and retraction of the right testicle. Waterson points out that the genital branch of the genito-femoral nerve gives a twig of supply to the *tunica vaginalis*.

#### *Retro-caecal Appendix.*

In regard to retro-caecal appendix we have two classes of case to consider. The first is that in which

the appendix is developmentally an extra-peritoneal organ. The second is that in which an intra-peritoneal appendix lies in the retro-caecal fossa and as the inflammation advances, may become shut off in a peritoneal pocket. In both those classes there are present reflex rigidity of the *quadratus lumborum* and deep tenderness (best demonstrated by control palpation of the opposite side) below the costal margin at the lateral border of the *sacro-spinalis*. There developed a tender lump, lying deep in the iliac fossa and giving rise to a tympanitic note on light percussion, due to gaseous distension of the caecum. This distension may give rise to borborygmi and occasionally painful peristaltic waves. Cutaneous tenderness of the skin supplied by the lateral (external) cutaneous nerve is occasionally present. This is to be distinguished from cutaneous hyperalgesia and visceral referred pain, for it is only present over the position of the nerve trunk distal to the inflammatory lesion and is not present posteriorly in the area of supply of the posterior rami of the lumbar nerves. There may be acute typhlitis spreading from the adjacent inflamed appendix and giving rise to diarrhoea and mucus in the stools. There are also certain peculiarities as regards the preperitonitic symptoms of the retro-caecal appendix; pain is frequently from the first only local and usually slight; vomiting is infrequent and the reflex rigidity of the anterior abdominal wall usually inconspicuous.

#### *Ascending Appendix.*

An ascending appendix lies lateral to the caecum in the right external lumbar fossa. Reflex rigidity of the muscles of the lateral abdominal wall is present. There is also found deep tenderness just above the iliac crest in the mid-portion of the lumbar (Petit's) triangle, with a maximum intensity at its lateral angle. A tender lump may be found in the concavity of the iliac crest and just superior to the anterior superior spine. This is easily felt as it is not masked by the overhanging caecum.

#### *Splenic Appendix.*

A splenic appendix runs from its origin supra-medially towards the umbilicus, passing behind the ileum and its mesentery.

Deep localized tenderness and rigidity of the anterior abdominal wall are usually present, but at the best only an indefinite mass can be felt owing to the inflammatory area being obscured by coils of small intestine. A painful response may occasionally be obtained from the psoas irritation test and frequent micturition may occur in rare instances, due either to reflex stimulation of the bladder centre or to direct implication of the ureter.

#### *Pelvic Appendix.*

Owing to a low position of the caecum or to an abnormally long meso-appendix a pelvic appendix crosses the iliac vessels and lies more or less free in the cavity of the pelvis or it may lie in relation



to the bladder or rectum or be adherent to the wall of the pelvis. With a long meso-appendix the process often retains some of its fetal characteristics, having a wide funnel-shaped opening into the caecum which is difficult to block by inflammatory swelling. Urgent reflex symptoms do not usually arise in this type of appendix unless a stercolith or an old stricture happens to be present.

Reflex rigidity of the muscles of the anterior abdominal wall is usually absent owing to the segments forming the pelvis lacking representation in the abdominal wall. Rigidity of the abdominal wall does not occur until the suprapubic region is involved and then the impressive feature is that both recti become slightly rigid.

Rectal examination usually elicits great tenderness when pressure is made towards the upper part of the right side of the pelvis. Later an inflammatory mass can usually be detected in the right quadrant of the pelvis by rectal or vaginal examination. A careful rectal examination should be made on every patient with an acute abdominal illness attended by uneasiness or pain and in which a definite diagnosis cannot be reached. As a rule no tender lump can be detected *via* the abdominal wall in association with a pelvic appendix. A response may be obtained to the thigh rotation or obturator test. This sign depends on the fascial envelope of the *obturator internus* muscle which lies on the lateral wall of the pelvis, being involved in adjacent inflammation. Internal rotation of the flexed leg under these circumstances causes hypogastric pain.

Certain general features are associated with pelvic appendix. The early initial epigastric pain is often considerable, whilst later continuous pain is often inconspicuous and, when present, may be localized just above the pubis and either to the right or to the left. The characteristic point of tenderness on the right side as described by McBurney is frequently absent and occasionally pressure over a corresponding point on the left side may excite severe pain. Irritation of the bladder or rectum is indicated by frequency of and pain during micturition and by diarrhoea or tenesmus. We all know that when the inflamed appendix is adherent to the bladder (or peritoneum overlying the ureter) or rectum, it causes symptoms of acute infection in the respective organ. Conversely a chronically inflamed appendix adherent to the right ovary may give rise during menstruation to pain in the right iliac fossa.

#### CONCLUSION.

The diagnosis of an "acute abdomen" is one which is often fraught with innumerable difficulties—difficulties that involve intricate questions of anatomy, physiology and pathology and for want of exact answers to these questions it is often necessary to base reasons on theories.

If, however, even on the somewhat insecure basis of hypothesis it is possible to formulate a few practical guides and derive some clinical assistance, we may legitimately feel that the ends are not altogether unjustified by the means.

## Reports of Cases.

### UNUSUAL COMBINATION OF PATHOLOGICAL LESIONS IN AN INFANT.

By ROBERT SOUTHEY, M.D., B.S. (Melbourne),  
Assistant Pathologist, Children's  
Hospital, Melbourne.

#### Clinical History.

B.L., female, *etatis* fourteen months, a full-time child, was never breast-fed. She was given cow's milk and water. She had convulsions when three days of age. She was in hospital in December, 1922, for two months with pneumonia, after which she developed a widespread impetigo of the face and scalp. Later she contracted measles, followed by a persistent cough and anorexia. Five weeks later she was admitted to hospital with fever, rapid respirations and convulsions.

Both ears had been discharging, the right for two months and the left for a few days, following a fall on the head.

The right chest was needled and although no pus was obtained in the syringe, the child coughed up a quantity of purulent fluid. The patient then appeared to be progressing favourably when suddenly convulsions again commenced and she died within a few hours.

#### Autopsy.

The body was that of a well developed fair child in a good state of nutrition. The heart was not enlarged and showed nothing unusual. On the left, apart from slight congestion deeply situated near the root of the lung and distributed in lobular fashion, nothing abnormal was detected macroscopically. On the right side, however, there was a fairly extensive pneumonic consolidation of the lower lobe which was in a condition of grey hepatization and presented on section a small abscess, 1.5 centimetres in diameter, situated in the extreme posterior and inferior aspect of the lobe. The cavity had a well defined wall and communicated directly with a small bronchial tube. The upper and middle lobes of this lung were uninvolved. The bronchial glands were enlarged and congested and the right bronchus contained a quantity of thick muco-pus. The abdominal viscera showed nothing worthy of note; there was no indication of tuberculous infection.

In the brain there was an extensive hæmorrhagic extravasation over the convex surface of the left cerebral hemisphere, extending on the medial surface to the depths of the medial longitudinal sulcus. There was a condition of septic meningitis spreading from the basal region along the line of the vessels over the convex surface of the cerebrum.

Both middle ear cavities contained a quantity of muco-pus and both tympani were perforated. On the left side the *dura mater* overlying the middle ear was stripped up for a short distance and the lateral sinus was filled with septic thrombus which extended posteriorly along the sinus as far as the mid-line. In a series of frontal sections of the hardened brain a glioma of diffuse and infiltrating character which extended from the frontal lobe to the parietal and temporal lobes of the same side, was discovered. Hæmorrhage into the substance of the tumour appeared to be the origin of the sub-arachnoid cortical extravasation above mentioned.

There was no indication of a fracture of the skull.

#### Summary.

This case history appears worthy of record on account of the occurrence in the one infant of three unusual pathological lesions, each sufficiently severe in itself to have given rise to a fatal issue, *videlicet*: (i.) Pulmonary abscess secondary to pneumonia, (ii.) *otitis media* with secondary septic meningitis, (iii.) hæmorrhagic glioma.

My thanks are due to Dr. H. Hume Turnbull for permission to publish the clinical notes of this patient who was under his care at the Children's Hospital, Melbourne.

## Reviews.

### MEDICINE.

A TWELFTH edition of "Hughes's Practice of Medicine" has been published by Dr. R. J. Scott.<sup>1</sup> The author states that he has tried to keep the book within the limits of a small manual for the busy medical practitioner. He says that the tried methods of yesterday are better than the theories of tomorrow. He carries this idea right through his book and the reader cannot fail to form the conclusion that, although the author aimed at the production of a practical manual of diagnosis and treatment, he has been unduly conservative. This is not a text-book for students nor is it a synopsis. In many respects, however, it will be found useful by the busy practitioner.

In the chapter on fevers, there is a good time table of the exanthemata and the more common communicable diseases. This should be very useful. In regard to the treatment of pulmonary tuberculosis, the author prefers general measures and does not use tuberculin. Protein sensitization is mentioned as an ætiological factor in the production of asthma, but nothing further is said about the modern treatment on these lines. Many useful prescriptions for asthma are included, but it is strange that no mention is made of adrenalin which is so commonly used in this condition. No mention is made of syphilis as a factor in the ætiology of aneurism. In the discussion on pernicious anæmia, the author has not referred to achlorhydria and the important rôle which it has been shown by recent research to play in this disease. The description of deficiency diseases is very sketchy and vitamins are spelt *vitamines*! The section of the book devoted to skin diseases contains many good formulae. In the chapter on mental diseases there is a good classification table and practical accounts of the various forms of insanity and of their treatment are added.

The author has emphasized that the aim of the book is conservative and it appears to us that this has been somewhat overdone. At the same time the busy medical practitioner will find in its chapters many good and practical points.

### PSYCHIATRY FOR GENERAL PRACTITIONERS.

As Sir James Crichton Browne remarks in his foreword to "The Common Symptoms of an Unsound Mind," Dr. Jeffrey is to be congratulated in writing a very helpful book.<sup>2</sup> It is designed primarily as a guide to the general practitioner who as he rightly points out, is the first to be consulted whether for certification or treatment in cases of mental disease.

The subject naturally lends itself to discussion under the heading of symptomatology rather than of diseases and this plan has been followed. There are chapters on delusions, disorders of perception (including illusions and hallucinations), states of exaltation, excitement and depression, mental confusion and altered conduct. The differential diagnoses are indicated in a concise manner. Treatment and prognosis are also considered. Finally the author touches upon the vexed question of legal responsibility.

The non-specialist should be grateful to possess a book in which the author deals with the problem of psychiatry more simply than is usually the case. Such technicalities as regression, complexes and libido receive no mention. Their omission detracts little from the presentation of the problems considered; though it is only fair to add that the author does not touch on the question of the neuroses, so could the more easily dispense with their use.

The scales are equally held between the psychogenic and physiogenic schools of causation. Dr. Jeffrey has a word

to say on the toxæmias, endocrines, psychic stresses and the constitutional factor. In his classification of mental diseases he urges that simple mania and melancholia occur apart altogether from manic depressive insanity. There is indeed considerable justification for this view. Otherwise his arrangement is conventional.

His plea for the compulsory notification of certain forms of mental diseases is perhaps not at the present time in the realm of practical politics. But everyone will agree with the author that the first step both of the general practitioner and the specialist must be: "To force upon the minds of the public that mental illness is a disease, that an insane person is a sick person and that a mental hospital is a hospital and not a prison." The attainment of this ideal alone would do much to help all concerned.

### REPRODUCTION.

THE appearance of the second and revised edition of Marshall's "The Physiology of Reproduction" will be welcomed by physiologists, morphologists and practitioners.<sup>3</sup> The author has been actively engaged in investigations bearing upon the reproductive cycle for over twenty years and has presented in this book an authoritative survey of the literature upon the subject. Detailed references are amply supplied in foot-note form and an author's index is appended. W. Cramer, J. Lochhead and C. Shearer have supplied special contributions to the work. A discussion of the breeding season in various phyla, the œstrous cycle in mammalia, changes in the uterus and ovary and spermatogenesis precede the chapter on fertilization itself. This chapter includes a useful summary by Shearer of Child's theory of the life cycle which has thrown so much light on the mechanism of peculiar modes of development, and renders less important the features concerned with the origin and supposed segregation of the germ cells which are emphasized as being of special significance in the Weismann theory of the germ plasm. An interesting chapter, involving the major points of comparative anatomy, follows on the male accessory reproductive organs including a description of the mechanism of erection, ejaculation and retraction. W. Cramer then deals with the bio-chemistry of the sexual organs. The generative glands are described by the author in their rôle as organs of internal secretion. This chapter includes a survey of the literature bearing on the functions of the *corpus luteum*. It is concluded that the absence of the uterus has no effect on the growth and development of the ovaries. Surgical examples of atrophy of the ovaries following hysterectomy are attributed to vascular interference. Dr. Lochhead's chapter on the placenta and nutrition of the fœtus is little changed, except for foot-note additions, from the previous edition. This writer's chapter on the changes in the maternal organism during pregnancy has been enlarged and partly rewritten by W. Cramer. The description of the innervation of the female generative organs including a discussion of the mechanism of parturition and of the cause of birth follow. The mammary glands and the process of lactation are dealt with at some length.

The chapter concerning fertility includes a discussion on abortion and the birth rate of man. The theories of sex determination are discussed resulting in the conclusion that all individuals are potentially bisexual, sex being determined in different cases by different factors and at different stages.

The final chapter is devoted to the subject of growth at different stages in the life of the individual, the duration of life and the cause of death.

This work comprises a comprehensive authoritative treatment of a subject of universal interest and will be useful to physiologists, morphologists and practitioners alike.

<sup>1</sup>"Hughes's Practice of Medicine, Including a Section on Mental Diseases and One on Diseases of the Skin," by R. J. E. Scott, M.A., B.C.L., M.D.; Twelfth Edition; 1922. Philadelphia: P. Blakiston's Son and Company; Crown 8vo., pp. 834, with sixty-three illustrations. Price: \$4.00.

<sup>2</sup>"Common Symptoms of an Unsound Mind," by G. Rutherford Jeffrey, M.D., F.R.C.P.E., F.R.S.E., with a Foreword by Sir James Crichton Browne, M.D., LL.D., D.Sc., F.R.S., F.R.S.E.; 1923. London: H. K. Lewis and Company, Limited; Crown 8vo., pp. 286. Price: 7s. 6d. net.

<sup>3</sup>"The Physiology of Reproduction," by Francis H. A. Marshall, Sc.D. (Camb.), D.Sc. (Edin.), F.R.S., with contributions by William Cramer, Ph.D., D.Sc., M.R.C.S., L.R.C.P., James Lochhead, O.B.E., M.A., M.D., F.R.C.S.E., and Cresswell Shearer, M.D., Sc.D., F.R.S.; Second and Revised Edition; 1922. London: Longmans, Green & Company; Royal 8vo., pp. xvi + 770, with 189 illustrations. Price: 36s. net.



## The Medical Journal of Australia

SATURDAY, APRIL 19, 1924.

### The Industrial Clinic.

THE subject of industrial hygiene has been referred to repeatedly in the pages of this journal. The importance of the whole question is sufficient justification. We have referred to the subject from its economic aspect and have endeavoured to show its bearing not only on industrial conditions generally, but also on the future generation. The health of young Australians depends largely on that of their elders. Healthy parents as a rule beget healthy children. We have also discussed the human factor in industry and made reference to the activities of the Commonwealth Department of Industrial Hygiene. The work is slowly forging ahead and in one State at any rate the appointment of a medical officer for industrial hygiene has been notified. Another important aspect of industrial hygiene is that of industrial clinics. Their value is being slowly recognized, for clinics of a more or less complete nature are gradually springing into being.

An industrial clinic may be defined as an organization, associated with an industrial undertaking, the officers of which have the duty of superintending the conditions under which the employees work, of treating illness occasioned by the employment as it arises and by watchfulness and forethought of preventing the occurrence of ill-health. One person on whom the success of an industrial clinic largely depends, is the trained nurse. She is mentioned first because she is generally a full-time officer; the medical officer may or may not hold a full-time appointment. It must be understood that it is from the latter that the nurse will receive her instructions both in regard to patients seen by him and also in regard to the routine treatment of emergencies which may arise in his absence. The first requisite to be provided in the establishment of a clinic is proper accommodation. A general office or consulting room is essential and this should be

supplemented by treatment or rest rooms for male and female employees. The office should include adequate accommodation for the filing of records. This work may well be undertaken by the nurse in charge. In large establishments it will most likely be necessary and advantageous to employ a secretary or clerk for this duty. The records should be of a comprehensive nature. Not only should they include an account of any illnesses or periods of disablement that have been occasioned by the work in the establishment, but they should be made to include as much of the personal and past history of the individual and those connected with him in his private life as may have bearing on his capacity as a workman and his health as an individual. By reference to these records it will often be possible for the medical officer to recommend to the management either a complete change or variation in the nature of the work of a given employee—a variation which will be advantageous to both employer and employed. More than this the records will be of use to the central authority on industrial hygiene in arriving at an estimate of the various hazards associated with different trades and occupations. While it is not possible for every industrial establishment regardless of size to have its own nurse in constant attendance, Dr. A. J. Lanza has stated that it should be possible for every establishment employing one hundred persons to do so.

The choice of a medical officer is of considerable moment. There are very few medical practitioners in Australia who have undergone a special course of requisite training in this subject. It is of primary importance that the medical officer attached to a factory or workshop should have a thorough understanding of the processes involved and should be able to form an estimate of the exact nature of the work done by each group of employees. His duty is to watch and anticipate. He cannot do this if he remains in his consulting room and waits for people to come and see him. It is more than likely that his recommendations may occasionally bring him into conflict with the management. If he can support his advice with reasonable grounds for its acceptance and is possessed of a certain amount of tact, he will most likely carry out the necessary

reforms. He will see to it that the employees have ready access to him at stated times. He will direct what treatment shall be undertaken at the factory and in the presence of a sufficiently serious illness he will send the patient home and refer him to his private medical attendant.

Both medical officer and nurse will find it necessary in work of this kind to study carefully the psychology of the people among whom they are working. Though they themselves are employed by the management, their chief care is the health of the employees and they have to gain the good will and confidence of the latter before they will be able to accomplish anything. The worker is always suspicious that a new scheme is something which has been planned merely to exploit him and produce a larger turnover. Actual experience has shown that these fears can be overcome and that the cooperation of employees can be obtained.

The industrial clinic must not be confused with such things as welfare schemes and amusement clubs. The latter are closely related to the industrial clinic and are certainly adventitious in that they make for happiness and contentment. They must not be allowed, however, to overshadow the most important issue. Industrial clinics are not the cure-all of industrial trouble, but they will be the means of minimizing illness and thus of lessening the burden of the community as a whole.

### Current Comment.

#### PLACENTA ACCRETA.

VARYING degrees of adherence of the placenta to the uterine wall are encountered by obstetricians. In the vast majority a line of separation can be found and the placenta can be removed manually. There is, however, a group of cases in which no line of separation can be discovered. The placenta is to all intents and purposes part and parcel of the uterine wall. This condition is known as *placenta accreta*. Its appearance is dependent on the presence of pathological changes in the uterine wall in which the developing ovum becomes embedded. Instead of being attached to the decidua, as is normally the case, the anchoring villi penetrate to the uterine muscle and sometimes extend into its substance causing damage or partial destruction. In other words as De Lee has put it, there is absence of the *decidual basalis*. Absence of decidual change

in the uterus might be occasioned by pathological states of the endometrium from either local or general causes. It might also be brought about by inefficient action of the hormone of the *corpus luteum* for this is regarded as being a sensitizing agent to the uterine mucosa to facilitate the embedding of the ovum. Absence of this hormonal action alone, however, would not be sufficient to cause a condition of *placenta accreta*. In the absence of such action abortion would generally result.

*Placenta accreta* is a rare condition. Dietrich in 1922 reported nineteen cases of the condition. He pointed out manual separation was impossible owing to the penetrative attachment and recommended that hysterectomy should be carried out whenever true *placenta accreta* was present. The subject has recently been discussed by Dr. J. O. Polak and Dr. G. W. Phelan.<sup>1</sup> They state that *placenta accreta* is a pathological entity and should not be confused with adhesion of the placenta. It is due to an entire or an almost entire absence of the *decidual basalis* which exposes the muscles of the uterine wall to the erosive action of the trophoblast and penetration of the villi. They point out that among the causes of the condition are previous manual removal of the placenta, vigorous curettage, endometritis, submucous myomata *et cetera*. They have reviewed six thousand deliveries occurring in the service of the Long Island College Hospital. In all their work they assumed the existence of abnormal adhesion of the placenta when it was retained within the uterus for more than two hours after the delivery of the child without the occurrence of uterine hæmorrhage. Separation of the placenta does not occur without bleeding. In *placenta accreta*, provided there has been no manipulation to cause partial detachment, there is neither hæmorrhage, descent of the cord or change in the position of the *fundus uteri*. Prolonged adhesion of the placenta may be due to muscular difficulties as when implantation of the ovum occurs in a tubal corner, when implantation has taken place on a uterine septum or when the placenta is large and thin as in certain instances of twins with fundal attachment. This form of adhesion must not be confused with *placenta accreta*. The normal structures of the *decidua basalis* can be demonstrated in these cases.

In the series of six thousand deliveries there were eight cases in which it was necessary to resort to manual removal of the placenta. Three were partially or completely adherent, but a line of cleavage could be found and followed till separation was complete. In four instances the placenta had separated, but was retained by a retraction ring. In one no line of cleavage could be demonstrated. Placental tissue was removed piecemeal. Removal was incomplete and hæmorrhage was so excessive that the uterus was firmly packed. The patient died and no autopsy was allowed. They conclude that the incidence of *placenta accreta* was only one in six thousand. In a series of private patients three further cases were encountered. In two instances piecemeal manual removal was attempted, hæmorrhage

<sup>1</sup> *Surgery, Gynecology and Obstetrics*, February, 1924.

was severe and the patients died. A third case of *placenta accreta* was one which occurred in the absence of *decidua basalis*, a result of repeated curettage with an implantation on the atrophic endometrium of a sub-mucous myoma. A large myoma was also present in the uterine wall. Examination with the gloved hand failed to reveal a line of cleavage and hysterectomy was carried out after an unsuccessful attempt to separate the placenta through the incision in the uterus. Recovery was uneventful. Macroscopical examination of the specimen revealed that the uterine wall had been replaced by placental tissue and at several points this had only a covering of peritoneum. Microscopical examination showed that there was an absence of decidua, the villi were attached directly to the uterine muscle. In several places syncytial cells were found in the fibres and masses of the same cells had split the muscle wall into fragments. Polak and Phelan claim that study of this specimen shows the futility of attempting manual removal in *placenta accreta*. They lay emphasis on the importance of aseptic exploration before traumatism of these friable tissues is undertaken. The high mortality associated with the condition is the direct result of improper treatment.

#### THE POSITION OF THE APPENDIX.

DR. RUTHERFORD DARLING'S article published in this issue is a useful résumé of a subject which comes within the daily experience of the majority of medical practitioners. It is well to take an occasional bird's-eye view of such a condition as acute appendicitis, for familiarity may lead to a failure to recognize underlying causes and to a wrong understanding as to possible manifestations. Dr. Darling does well to emphasize the embryological aspect. The proper application of this point of view can alone explain the variations of position of the organ and variations in position, as Dr. Darling shows, produce considerable differences in signs and symptoms. The figures also quoted by him in regard to the percentage incidence of the various positions have been generally accepted. In this connexion it is interesting to note that a recent study has been made by Dr. Reginald J. Gladstone and Dr. Cecil P. G. Wakeley of the relative frequency of the various positions of the appendix.<sup>1</sup> These two investigators made a series of observations on three thousand bodies in the operating theatre, the *post mortem* room and the dissecting room. They divide the positions which may be assumed by the appendix, into anterior or pre-ileal; splenic or post-ileal; pelvic, on the psoas muscle or hanging over the brim of the pelvis; sub-caecal, beneath the *caput caeci*; post caecal or retrocolic and ectopic.

The anterior position was discovered in twenty-seven instances or 0.9% of the whole series. In this type the appendix is directed upwards and forwards towards the abdominal wall and also medially in front of the terminal part of the ileum. The

meso-appendix is unusually long, its free edge is directed upward and the appendicular border is to the right. The splenic or post-ileal position is more uncommon. Only fifteen instances were discovered (0.5%). The appendix passes upwards and to the left beneath the mesentery or it may be curled up in the ileo-caecal fossa under cover of the ileum and the ileo-caecal or "bloodless" fold of Treves. Gladstone and Wakeley point out that should inflammation occur in an appendix in this position, there is a likelihood of the appendix becoming adherent to the mesentery and setting up mesenteric thrombosis. The pelvic or descending position was quite common and discovered in eight hundred and twenty-five or 27.5% of the series. In this type the appendix passes downwards on the psoas muscle and may overhang the brim of the pelvis. The meso-appendix is usually long. The appendix was found in the sub-caecal position beneath the *caput caeci* in fifty-six instances or 1.86% of the series. In this type it lies in the lower part of the iliac fossa and is usually turned to the right. The post-caecal and retro-colic positions were the most common in the series and were found in 2,076 instances—an incidence of 69.2%. Gladstone and Wakeley state that this is in accord with the general experience of both surgeons and anatomists at the present time. It differs from the records of many previous observers in this field. They endeavour to explain the difference. They state that difficulties arise from the fact that one group overlaps the other and that the posterior positions are often subdivided into one or more groups which are in reality the same. The appendix may be found free in a post-caecal or retro-colic pouch of peritoneum. It may be held in contact with the caecum or ascending colon by a short mesentery. It may be adherent to the caecum or colon and these with the appendix may form the wall of a retro-colic pouch of peritoneum. Lastly the appendix may be found behind the caecum and ascending colon, but owing to obliteration of the retro-colic pouch it may be entirely extra-peritoneal. They point out that there may be a considerable degree of variation in the extent to which the caecum and ascending colon become adherent to the posterior wall of the abdomen in the normal course of development apart from any subsequent inflammation. Inflammation in an appendix which is lying free may cause adhesion of the organ to the caecum or colon. Unfortunately they do not give any figures in regard to the frequency of the various types of post-caecal or retro-colic positions that they have described. It would have been interesting to know in what percentage the appendix was extra-peritoneal. They make reference to the work of Lafforgue who divided the positions of the appendix into the ascending type, the descending type, the lateral and internal and the lateral and external types. They point out that the classification in Lafforgue's work was based on the direction of the tip of the appendix or its longitudinal axis rather than on its position relative to the caecum, ileum, pelvic brim or peritoneal fossae. They claim that from the clinical standpoint their classification is more practical than that of Lafforgue.

<sup>1</sup> The British Journal of Surgery, January, 1924.



## Abstracts from Current Medical Literature.

### PHYSIOLOGY.

#### Muscular Exercise and Oxygen Content of Arterial Blood.

H. E. HIMWICH AND D. P. BARR (Journal of Biological Chemistry, September, 1923) have studied the effects of exercise on the oxygen content and oxygen capacity of the arterial blood. With short periods of vigorous work on a bicycle ergometer at sea level the oxygen content of the arterial blood rose above the resting value during and after the exercise. The oxygen capacity of the blood also rose, but to a less extent than the oxygen content. Since both oxygen content and saturation of haemoglobin are higher after vigorous exercise, no part of the hyperpnoea from exertion can be attributed to an anoxaemia in the arterial blood. In exhausting exercise it is possible that an anoxaemia in the arterial blood may play a part in the causation of hyperpnoea. With vigorous but not exhausting exercise at sea level certain factors tend to diminish oxygen content of the blood, some tend to increase it, while the influence of others is unknown. The greater utilization of oxygen in the tissues causes the venous blood to return to the lungs with less oxygen. This must be more than made up by the oxygen diffusion in the lungs. The more rapid blood flow in the pulmonary circuit during exercise tends to diminish the volume of oxygen taken up by each unit of blood, hence, any rise in content must be due to an increased total diffusion of oxygen. Of the various factors which influence diffusion, the diminished alkalinity of the blood is known to limit it, while the greater concentration of haemoglobin and the diminished oxygen tension of venous blood tend to raise it. The rise in content may also be due in part to an increase in alveolar area and alveolar oxygen tension as well as to a decrease in the thickness of the membrane. For short periods of moderate exercise at sea level the factors which augment oxygen diffusion, outweigh the effect of the increase in circulation rate. With increased exercise diffusion increases slowly so that the continued increase in circulation rate reduces arterial content. It is possible that the severity of the exercise which a normal individual will tolerate, may be determined by the amount of oxygen which can diffuse through the lung membranes, rather than by the capabilities of the circulation.

#### Exposure to Radium and Metabolism.

J. C. MOTTRAM AND W. CRAMER (Quarterly Journal of Experimental Physiology, November, 1923) have studied the effects of small doses of radiation from radium applied over long periods to young male rats. These animals put on weight more rapidly

than the controls and became very obese. The testes showed intense atrophy of the seminiferous tubules and hypertrophy of the interstitial cells. The pituitary gland also showed changes in all three parts of the gland. The primary effect on the testes was atrophy of the seminiferous tubules. The resulting shrinkage of these tubules allowed the interstitial cells to hypertrophy. Comparison with the effects of castration shows that the elimination of the functional activity of the seminal epithelium does not lead to obesity. The observations show that the two component tissues of the testis, the spermatogenic tissue and the interstitial tissue, have two distinct and independent effects on the organism and that of these two effects that of the interstitial cells is the most profound. Obesity and sterility are frequently associated, but the relation between the two is by no means clear. Obesity sets in when the interstitial cells hypertrophy, but it is not yet determined whether the absence of the seminal epithelium is an additional factor. A study of the conditions under which hypertrophy of the interstitial cells occurs, shows that this is almost always associated with atrophy of the seminiferous tubules. This suggests that the hypertrophy of the interstitial cells can be explained as a mechanical effect.

#### The Force Exerted by Contracted Capillaries.

It has been shown by Cotton, Slade and Lewis that the "white line" produced on the human skin by light stroking is due to an active contraction of the capillaries. T. Lewis (Journal of Physiology, December, 1923) has used this "white line" reaction in studying the force which actively contracted capillaries of the human skin can exert. A "white line" is produced on the skin and suction is applied by means of a glass capsule and the pressure over the line reduced until it takes the tint of the neighbouring skin and becomes indistinguishable or the venous pressure is raised in the corresponding tissue area by constricting the veins at accurately known pressures until the line of pallor is abolished. Each method approximately indicates the amount of force required to distend the contracted capillaries. The magnitude of the force usually ranges from fifty to one hundred milligrammes of mercury. These observations help to explain why capillary distension in the human foot does not occur on assuming the erect posture; contractility of the capillary wall in the foot would have little functional value if it were not highly developed and unless the capillaries of the foot were not normally tonically contracted.

#### On the Action of Alcohol.

R. J. S. McDOWALL (Journal of Physiology, December, 1923) has studied the effect of alcohol on the venous pressure. It is usually stated that alcohol has little effect on the circulation apart from its dilating

effect on the superficial vessels which is compensated by constriction of internal vessels. In animals under chloralose injections of dilute alcohol intravenously cause a profound fall of venous pressure with, it may be, no change in arterial pressure. It is suggested that this fall of venous pressure with the consequent relief of the right side of the heart is the basis of the alcohol therapy so strongly adhered to by many clinicians in cases of cardiac embarrassment. Other facts indicate that the failure to recognize this fall hitherto may have been due to the use of anaesthetics which depress the circulation.

#### Hypoglycaemia and Liver Injury.

EXPERIMENTAL evidence shows that the liver plays an important part in the regulation of the normal concentration of the sugar in the blood. Following the total extirpation of the liver in dogs a progressive decrease of the blood sugar occurs. No ill-effects are observed until the blood sugar reaches about 0.06%, when the first signs of muscular weakness are noted. Shortly thereafter and concomitant with a further decrease in the blood sugar level muscular twitchings occur and the animal finally dies in convulsions. M. Bodansky (American Journal of Physiology, October, 1923) has sought to determine whether hypoglycaemia occurs in severe chloroform poisoning and in hydrazine and phosphorus intoxications. The initial effect of severe liver damage produced by these agents is hyperglycaemia. Subsequently this effect disappears as the carbohydrate store is depleted and the blood sugar level falls to sub-normal levels. Death resulting from acute chloroform and phosphorus poisoning is not entirely due to functional damage of the liver as these substances are general protoplasmic poisons. On the other hand in chronic conditions of liver injury or in conditions of acute chloroform and phosphorus intoxication in animals with damaged livers, hepatic insufficiency may be the cause of death.

#### "Insulin" and the Central Nervous System.

THE typical convulsions shown by rabbits whose blood sugar has been lowered to about 0.045% by the injection of "Insulin" appear to be somewhat similar to those produced by strychnine poisoning. J. M. D. Olmstead and H. D. Logan (American Journal of Physiology, October, 1923) have studied the effects of "Insulin" on decerebrate and decapitated cats. They found that decerebrate cats with the pituitary body left intact maintain a high blood sugar level which is not materially reduced by "Insulin." When the pituitary body is removed in decerebrate cats "Insulin" produces typical convulsions. In decapitated cats the blood sugar percentage may be lowered and maintained for many hours below the convulsion level of normal cats, yet no signs of convulsions be observed. It

appears from the experiments that the bulbar centres are affected by injections of "Insulin" since typical "Insulin" convulsions can be induced in decerebrate cats whose cerebral hemispheres have been completely removed, but not in decapitated cats. The experiments suggest that anoxæmia is an important factor in producing the characteristic symptoms of the convulsion due to "Insulin" and an asphyxial convulsion such as is caused by clamping the trachea of a rabbit or cat. This, as well as the fact that the arterial blood of an animal in a convulsion due to "Insulin" is very dark and venous in character, may indicate that the action of "Insulin" on the medulla is a secondary effect rather than a direct one upon the nerve cells of this region.

### BIOLOGICAL CHEMISTRY.

#### A Micro-Method for the Determination of Hydrogen Ion Concentration.

J. A. HAWKINS (*The Journal of Biological Chemistry*, September, 1923) has devised a simple micro-method for the estimation of the hydrogen ion concentration of whole blood. Thirty drops of a 0.03% solution of phenol red are added to fifty cubic centimetres of a 0.9% solution of sodium chloride and adjusted to pH 7.3. Five cubic centimetre portions of this solution are placed in tubes with a diameter of sixteen milligrammes and covered with paraffin oil. The blood is drawn from a vein directly into a one cubic centimetre pipette graduated to hundredths by attaching a needle with a short rubber tube to the pipette. The needle and rubber are then detached and 0.25 cubic centimetre of blood is run under the oil into one of the tubes containing the saline indicator solution. The blood and solution are thoroughly mixed by careful stirring. The tube is centrifuged for ten minutes completely throwing down the red corpuscles and is then placed in a comparator block and the pH determined by matching to the nearest colour standard. The colour standard tubes are sixteen millimetres in diameter and contain five cubic centimetres of Sørensen's standard phosphate solutions ranging in steps from pH 7 to 7.80.

#### Calcium in the Blood in Pregnancy.

SOME years ago, as a result of observations that the blood calcium increases in the later months of pregnancy, Bell and Hick suggested that the normal stimulus for the induction of labour is the augmented blood calcium. F. P. Underhill and Alice Dimick (*The Journal of Biological Chemistry*, November, 1923) have made a number of analyses of the blood of non-pregnant women and women at various stages of pregnancy. The calcium content of the blood of non-pregnant women was found to be quite variable, ranging from 5.8 to 8 milligrammes per hundred grammes of blood. With

respect to pregnant women it was found that the average blood calcium content was somewhat higher than the corresponding figure for non-pregnant women. From the average figure it was observed that the calcium had a tendency to become higher at the period of parturition than in the earlier months, although the highest figure was that of four months when the average blood calcium was 8.6. In view of the relatively great individual variations it cannot be said that a positive increase in the calcium content of the blood with progress of the period of pregnancy has been demonstrated. The results, therefore, fail to lend support to the hypotheses of Bell and Hick that the increased calcium content of the blood at term is of significance in the induction of labour.

#### Significance of Acetone Tests.

THE qualitative tests most commonly employed for acetone bodies in the urine are the sodium nitroprusside test and the ferric chloride test. These are usually regarded as selective tests for acetone and diacetic acid respectively. E. J. Bigwood and W. S. Ladd (*The Journal of Biological Chemistry*, November, 1923) have made qualitative and quantitative analyses on the same samples of many samples of urine. In addition they have carried out certain experiments devised to throw light upon the selectivity, sensitivity and quantitative significance of these tests. They find that solutions of pure acetone give a colour reaction with sodium nitroprusside. Solutions of diacetic acid give a colour reaction with ferric chloride; acetone alone does not. Electrolytes present in the urine, especially sodium chloride, tend to intensify the colour of the ring in the sodium nitroprusside test. Quantitatively, because of the many interfering substances, the tests as usually done serve as only the crudest approximations in indicating the amounts of acetone and diacetic acid present. The ferric chloride test appears to give results somewhat less eccentric than the nitro-prusside test.

#### Nature of Vitamin B.

P. A. LEVENE and M. MUHLFELD (*The Journal of Biological Chemistry*, September, 1923) have made some experiments about the identity of antineuritic vitamin with the water-soluble vitamin B. They have used yeast as a source of these vitamins and employed pigeons in tests for the antineuritic substance and white rats in tests for the growth factor. Four different yeasts have been investigated in respect to their effects on pigeons and rats when added in different quantities to the diet. It has been found that there was no parallelism between the amount of the yeast needed to maintain normal growth in rats fed upon casein, starch, butter fat, lard, cod liver oil and salts and the amounts of the different yeasts needed to avert polyneuritis in pigeons fed on ground white rice. The authors conclude

that they supply additional evidence that the antineuritic and growth-promoting principles are not identical, but point out that the final solution of the problem will be furnished by a knowledge of the chemical constitution of the active substances.

V. E. NELSON, V. G. HELLER and E. L. FULMER (*The Journal of Biological Chemistry*, September, 1923) present data on the growth of rats fed with yeast from which they conclude that it is unnecessary to postulate a new vitamin apart from vitamin B. The authors have found that rats can be reared successfully to the third generation on rations in which yeast has been the sole source of protein, provided a special salt mixture is given in the ration. It appears necessary to add calcium sodium and chlorine in the salt mixture. When the 5% mixture of usual salt is added to the ration the majority of the animals remain sterile. Further if young are born, most of them soon die. To obtain normal growth the diet of filtered butter fat and dextrin must be supplemented with more than 25% yeast. Supplementary quantities of calcium carbonate and of sodium chloride must be added to the usual 5% salt mixture in order that the animals be fertile and rear their young.

#### Estimation of Hæmoglobin.

J. L. STODDARD and G. S. ADAMS (*The Journal of Biological Chemistry*, September, 1923) have made an attempt to estimate hæmoglobin by a refractometric method. While there is a widespread belief that hæmoglobin may be estimated by a measurement of oxygen capacity and the use of Hufner's factor, 1.34 cubic centimetres of oxygen per gramme of hæmoglobin, there is a difference of over 10% of the total between the Haldane and van Slyke method of determining oxygen capacity. Colorimetric methods are based on assumptions of oxygen capacity. The authors have tested two refractometric methods and compared the results with a gravimetric estimation of hæmoglobin based on the total solids in the solution. Their values are therefore minimal values. They find that the van Slyke method gives results of greater accuracy than the Haldane method. The results with the van Slyke method are low, giving a factor 1.26 instead of 1.34 for oxygen capacity per gramme of hæmoglobin. With the Haldane method this factor becomes 1.15. The refractive constant "a" for human hæmoglobin determined on pure hæmoglobin solutions, the concentration of which was obtained by getting the dry weight at 110° C. was found to be 194.2. Compared with the value 183 found by Howard for crystalline hæmoglobin this figure gives 5.7% water of crystallization in hæmoglobin crystals. The authors note that hæmoglobin can be coagulated at pH 6.8 in the presence of sodium chloride at 100° C. in three minutes. Details of a short practical method are given for the estimation of hæmoglobin.



## British Medical Association News.

### SCIENTIFIC.

A MEETING OF THE VICTORIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION was held at the Walter and Eliza Hall Institute on March 5, 1924, Dr. J. W. DUNBAR HOOPER, the PRESIDENT, in the chair.

#### The Rockefeller Foundation.

SIR JAMES BARRETT delivered a brief address on the Rockefeller Foundation and showed a number of lantern slides in illustration of his remarks.

In defining the nature of the Rockefeller Foundation Sir James Barrett said that it was chartered to promote the well-being of mankind throughout the world. It was devoting its activities and resources almost entirely to public health and medical education.

Its present major programme, carried out in thirty-nine governmental areas, embraced the following activities: (i.) Aid in support of schools of medicine and public health in America and abroad; (ii.) demonstrations in cooperation with governmental authority in (a) control of malaria in Southern American States, (b) control of hookworm disease in America and abroad, (c) eradication of yellow fever, (d) cooperation in country public health work; (iii.) support of fellowships for selected doctors, public health workers and nurses in connexion with regular programmes in many lands.

The Foundation carried on its principal activities through its departmental organizations: (i.) The International Health Board, (ii.) the China Medical Board and (iii.) the Division of Medical Education. It also co-operated, usually for purposes of demonstration, with other unaffiliated organizations working in the same general fields. The Foundation's method in its public health work was to demonstrate the practicability of controlling certain diseases and to encourage the assumption of responsibility for their control by the governments concerned.

The Foundation's principal funds were \$174,000,000 both the income and principal of which were available for appropriation. Its resources and policies were controlled by a self-perpetuating board of trustees who served without compensation.

The General Education Board, the Rockefeller Institute for Medical Research and the Laura Spelman Rockefeller Memorial, also founded by Mr. John D. Rockefeller, were controlled by their own boards of trustees and had their own funds.

The promotion of education within the United States "without distinction of race, sex or creed" was the chartered purpose of the General Education Board. It included in its programme the aiding of colleges and medical schools and the promotion of rural and agricultural education in the United States.

"Medical research with special reference to the prevention and treatment of disease" was the purpose of the Rockefeller Institute for Medical Research. In its laboratories and in its hospitals it investigated the causes of diseases and sought methods of prevention and cure.

The Laura Spelman Rockefeller Memorial, recently founded, was considering as its chief field the welfare of women and children.

Obviously to accomplish permanent benefits in its chosen field of public health and medical education, the Rockefeller Foundation had to limit its activities to a few comprehensive programmes and demonstrations. It had to decline many miscellaneous applications, however worthy. For instance, the Foundation had on principle to decline requests: (i.) To give or lend money to individuals; (ii.) to invest in securities on a philanthropic rather than on a business basis; (iii.) to finance patients or altruistic movements involving private profit; (iv.) to support propaganda to influence public opinion on social or political questions.

In order to carry out this programme the Foundation had received from Mr. J. D. Rockefeller, Senior, a sum

of between thirty-seven and thirty-eight million sterling. This had been invested and the income was available yearly for the purposes of the Foundation, which it would be noted was incorporated and was a public institution. Part of the capital had been spent principally in the purchase of land and buildings in Peking. Including the amount so spent the Foundation had £35,000,000 available. When its work commenced it had assisted a considerable number of miscellaneous activities, but it had ultimately settled down to three lines of development, the organization of medical education in China, assistance to medical education in general and the promotion of international health. As the work had developed since the establishment in 1913, it had become obvious to those who conducted it that the problem of public health depended upon the production of medical practitioners endowed with scientific imagination and, in consequence of this belief, increasing sums had been spent on medical education and preventive medicine in addition to popular propaganda undertaken by the International Health Board. The direct activities of the International Health Board were indicated by four achievements: (i.) The Hookworm Campaign successfully conducted in many parts of the world; (ii.) the elimination of yellow fever as a disease except at three points—a small part of Brazil, a small part of Mexico and of West Africa where it was still endemic; (iii.) an immense reduction in malaria and (iv.) the anti-tuberculosis campaign in France. Sir James Barrett said that the manner in which the work was conducted was well illustrated by the following statement taken from the President's report of 1922.

During the year 1922 the Rockefeller Foundation, either directly through its departmental agencies, the International Health Board, the China Medical Board and the Division of Medical Education, (i.) endowed chairs of medicine and surgery in Hongkong University; (ii.) pledged \$1,125,000 toward new buildings for the College of Medicine of the State University of Iowa; (iii.) contributed to the current maintenance of two medical schools in Canada; (iv.) completed the buildings, strengthened the faculty and wholly financed the Peking Union Medical College; (v.) agreed to appropriate \$300,000 toward laboratories and pre-medical teaching in two Chinese institutions and in one missionary university in Peking; (vi.) helped nineteen hospitals in China to increase their efficiency in the care of patients and in the further training of doctors and nurses; (vii.) promised to cooperate in the rebuilding and re-organization of the medical school of Sao Paulo, Brazil, and of the medical schools of Siam in Bangkok; (viii.) made a survey of medical schools in Austria, Czechoslovakia, Germany, Hungary, Poland and Switzerland and studies of English and Scotch methods of clinical teaching; (ix.) sent eminent medical men as visiting professors or consulting officers to China, the Philippines, Brazil and Salvador; (x.) arranged a commission of medical scientists from Strasburg to visit the United States and England; (xi.) gave emergency aid in the form of medical literature, laboratory supplies and apparatus, fellowships and stipends to promising investigators and teachers in the Pasteur Institute of Paris and in many other European centres; (xii.) pledged two million dollars toward the site, building and equipment of a school of hygiene in London; (xiii.) cooperated with State boards of health in maintaining institutes and instruction for health workers; (xiv.) shared in thirty-four country-wide and thirty-two town demonstrations of malaria control in ten Southern States and continued field studies and surveys in the United States, Porto Rico, Nicaragua, Brazil, Palestine, Australia and the Philippines; (xv.) cooperated with the Mexican and other governments in steadily restricting the prevalence of yellow fever; (xvi.) resurveyed centres of hookworm infection in four Southern States and carried on control work in twenty-one foreign governmental areas; (xvii.) took part in promoting full-time health service in one hundred and sixty-three counties in eighteen States of the United States and in several counties in Brazil; (xviii.) agreed to support for five years the disease-reporting service and for three years the international exchange of health personnel programme of

the Health Section of the League of Nations; (xix.) provided fellowships in public health, medicine, nursing, chemistry and physics to two hundred and thirty-seven advanced students from twenty-three countries; (xx.) by consultation and providing of personnel aided public health administration in the United States, Australia, Brazil, Canada, Central America, Czecho-Slovakia, France and the Philippines; (xxi.) contributed to mental hygiene projects, demonstrations in dispensary administration, hospital information service, surveys of nursing education and hospital management, the organization of tuberculosis work in France, the training of French health visitors and other undertakings in the field of public health and medical education.

Sir James Barrett pointed out that the Foundation was governed by a body of honorary trustees who made appointments and directed the general policy. The work was actually carried out by a numerous and highly trained staff of specialists, who were employed by the Foundation. In fact, the organization was comparable to an international medical university.

#### Public Health.

Sir James Barrett also exhibited three cinematograph films relating to subjects connected with public health. He stated that the films had been presented by the proprietors of *The Herald* and *Weekly Times* to the Victorian Branch of the Public Health Association of Australia.

The first film, entitled "The Rat Menace" demonstrated the destruction worked by rodents, the rapidity with which they bred and the part they played in the dissemination of disease. The picture concluded with a forcible appeal for the practice of active private and corporate measures directed towards the extermination of rats.

The second film "Jinks," although cast in the form of a farce was well designed to catch the popular imagination and impress the lesson of the necessity for the cultivation of personal hygiene in the struggle of the race against tuberculosis. The lesson of the film for the individual was that he should acquire the habits of fresh air and outdoor exercise and should undergo a physical examination every year.

The third film included an excellent representation of the life-cycle of the malarial parasite and the manner in which man became infected. Measures of proved efficacy for the extermination of the *anopheles* mosquito in its favourite breeding places were well illustrated as were also protective measures in mosquito infested districts. A section of the film contrasted good and faulty screening of doors and windows. The picture concluded with a lucid demonstration on the care of milk in the home.

Sir James Barrett intimated that the Victorian Branch of the Public Health Association would make these and similar films available on application to medical men who might wish to employ them in the interests of public health.

The PRESIDENT said that although it was contrary to custom to record a vote of thanks, he felt that he was expressing the feeling of the meeting when he assured Sir James Barrett of their very great appreciation of his instructive and entertaining evening.

A MEETING OF THE QUEENSLAND BRANCH OF THE BRITISH MEDICAL ASSOCIATION was held at the B.M.A. Building, Adelaide Street, Brisbane, on March 7, 1924, Dr. D. GIFFORD CROLL, C.B.E., the PRESIDENT, in the chair.

#### Multiple Enlarged Glands of the Neck.

DR. R. GRAHAM BROWN showed a female patient, aged sixty-two years, who was suffering from multiple enlarged glands of the neck and parotid region. These had been gradually increasing in size for some years and some of them were as large as a duck egg. All the glands were freely movable under the skin and on the deep structures. Two years previously Dr. Graham Brown had removed from the same patient greatly enlarged faucial and lingual tonsils for the relief of respiratory obstruction. There had at that time also been considerable difficulty in swal-

lowing. At the time of demonstration there was a recurrence of enlarged adenoid tissue in the inferior tonsillar and lingual regions on the left side. A microscopical examination of the tonsillar tissue removed two years previously had merely revealed the presence of general hypertrophy. No pathological changes had been discovered in the blood. No other enlargement of glands had occurred in any other part of the body.

Dr. Graham Brown asked for the opinion of members in regard to the diagnosis. He stated that three medical practitioners in consultation had diagnosed the condition prior to the operation as inoperable cancer. He had seen quite a number of patients whose condition had been diagnosed in the same haphazard manner and he did not think it was fair to make such a diagnosis until thorough examinations of the tissues had been made. He proposed to use X-ray treatment on the glands and to apply diathermy to the tonsillar tumours. Dr. Val McDowall was of the opinion that X-ray treatment would have a beneficial effect on the glandular enlargement. The patient was otherwise in good health and had lost no weight.

#### Correction of Nasal Deformity.

Dr. Graham Brown also showed a man, aged twenty-five years, who had been hit on the nose at the age of eight years with the handle of a windlass. This had produced a very unsightly and bad deformity. Dr. Graham Brown had operated on this patient ten days previously. He had adopted the technique of Gillies, except that instead of using costal cartilage he had used a septal cartilage obtained from previous septal operations. He had also used the patient's own middle turbinate bone and cartilage. He had boiled the cartilage for ten minutes and had also boiled the middle turbinate bone after suitable preparation. It had been necessary to chisel away a considerable amount of the nasal bones. The patient presented quite a satisfactory nose and was very pleased with the result.

#### Angio-Neurotic Oedema.

Dr. Graham Brown's third patient was a boy aged fourteen years. His features had always been heavy, the eyelids and lips had been swollen since early childhood. In October, 1921, Dr. Graham Brown had performed a sub-mucous resection of the nasal septum and had enucleated the tonsils and removed the adenoids. The mother had brought the boy back in November, 1923; she had said that the child's face had been swollen ever since the operation. At this time there had been a typical appearance of angio-neurotic oedema of the face, lips and eyes extending across the root of the nose. The mother had said that the boy woke up every morning in such a condition and as the day advanced the swelling became less. Dr. Graham Brown said that it had been his duty to prove to the mother that the condition was not due to the operation on the nose. He had given the boy a series of intra-muscular injections of Armour's peptone. Definite reactions had occurred with the first few injections, but these had gradually diminished. The protein in the diet had been reduced to a minimum quantity and the use of milk had been prohibited. It was interesting to note that on taking some milk in his tea on one occasion, the patient's face had become enormously swollen about three hours after ingestion of the milk. The patient had had no injections since January, 1924, and had remained in his improved condition.

Dr. Graham Brown said that he did not pretend to speak with authority on the question of protein sensitization, but he had been lead to use of Wettes and Armour's peptone, as supplied by the Commonwealth Serum Laboratories, by Dr. Eustace Russell. Dr. Russell had had a large experience with this method of treatment.

Dr. Graham Brown in this connexion referred to the condition of a patient who suffered from very severe asthma with chronic nasal accessory sinusitis. The patient had manifested a definite idiosyncrasy for milk. Upon giving this patient intra-muscular injections of small quantities of milk, attacks of asthma had been precipitated. This procedure had been adopted in an attempt to prove what was a clinical fact, that the patient could not take milk.

**Cinema Apparatus.**

A short exhibition of the Pathé Baby Clinic was given.

**Historical Notes.**

DR. E. SANDFORD JACKSON read a paper entitled "A Comparison of Two Annual Lists—Those of 1827 and 1832—from Brisbane Hospital Records of that Date, Showing the Heavy Incidence in the Morton Bay Settlement of Malarial Fever, Dysentery, Rheumatism and Ophthalmia" (see page 381). The paper was illustrated by lantern slides depicting old buildings and various individuals who had been associated with the hospital between the years 1824 and 1885.

A MEETING OF THE EYE AND EAR SECTION OF THE VICTORIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION was held on March 4, 1924, SIR JAMES BARRETT, the PRESIDENT, in the chair.

**Third Nerve Paralysis.**

DR. PERCY WEBSTER read the history of a patient who had suffered from third nerve paralysis caused by indirect violence. A lead pencil had entered the orbit on the inner side of the eye. Following this injury paralysis of the third nerve had developed. This had cleared up three months later, except that the pupil had become a little dilated when the child got tired. The suggestion had been made that the blow had turned the eye in sharply and had stretched the third nerve. No other satisfactory explanation had been forthcoming.

**Orbital Cellulitis.**

DR. E. L. GAULT read the clinical notes of two cases of orbital cellulitis. The first patient had suffered from a condition which had resembled thrombosis of the cavernous sinus. The other eye had become involved, but the lesion had cleared up. Oedema had been present over the mastoid process, but the eyeball itself had not been affected. The sight in the eye first affected had been good for many weeks, but eventually the cornea had become involved. At the time of reporting the eye was still proptosed, but the patient was improving.

Dr. Gault's second patient was a man aged thirty-five years. The condition had developed suddenly with swelling, redness and proptosis of the eye ball. Incision had not resulted in the evacuation of pus. The following day the sight in the affected eye had been lost and the orbit had been exenterated. Pus had been found, the orbit had communicated with both the frontal sinus and the antrum. Both of these had been full of polypi. The polypi had been cleared out and the patient had made a good recovery.

**Optic Nerve Tumour in a Child.**

DR. M. C. GARDNER reported an instance of optic nerve tumour in a child.

**Perinaud's Conjunctivitis.**

Dr. Gardner also demonstrated a case of Perinaud's conjunctivitis.

**Foreign Body in the Sclera.**

DR. EDWARD RYAN demonstrated a case of foreign body in the sclera.

**Tuberculous Conjunctivitis.**

Dr. Ryan also showed a patient who was suffering from tuberculous conjunctivitis. The condition had improved to a considerable extent as a result of treatment with the actual cautery.

**Spring Catarrh.**

DR. F. J. B. MILLER showed a patient who was suffering from spring catarrh. Treatment was being carried out with radium by Dr. Dennis.

**Ophthalmological Congress.**

THE PRESIDENT also reported having received a letter from the Secretary of the London Ophthalmological Congress for 1925, inquiring about the attitude of Australian oculists to the Congress. The Secretary was instructed to reply that the Section was in sympathy with

the movement and that any members in London at that time would join the Congress as representatives of the Section.

**MEDICO-POLITICAL.**

A MEETING OF THE EYE AND EAR SECTION OF THE VICTORIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION was held on March 4, 1924, SIR JAMES BARRETT, the PRESIDENT, in the chair.

**Optician's Bill.**

THE PRESIDENT reported the action of a special committee appointed by the Section in connexion with the proposed Opticians Bill. In consultation with representatives of the Victorian Optical Association and the Parliamentary Draftsman it had been decided to draft a bill in which there was to be no mention made of sight testing. A board would be appointed to register opticians and that board would examine candidates for registration in conjunction with such bodies as the University or technical schools. These provisions would not be applied to established opticians who would have to be registered without examination. The action of the special committee was confirmed by the meeting.

**NOMINATIONS AND ELECTIONS.**

THE undermentioned have been nominated for election as members of the New South Wales Branch of the British Medical Association:

LEE BROWN, ROBERT KINGSBURY, M.B., Mast. Surg., 1920 (Univ. Sydney), 139, Macquarie Street, Sydney.

HOLLIDAY, RAY BOWMAN, M.B., Ch.M., 1923 (Univ. Sydney), Royal Prince Alfred Hospital, Camperdown.

STEEL, ROBERT STANLEY, M.B., Ch.M., 1923 (Univ. Sydney), Tryon Road, Lindfield.

**Medical Societies.****THE ALFRED HOSPITAL CLINICAL SOCIETY.**

A MEETING OF THE ALFRED HOSPITAL CLINICAL SOCIETY was held at the Alfred Hospital on March 25, 1924, DR. J. P. MAJOR, the PRESIDENT, in the chair.

**Progressive Muscular Atrophy.**

DR. KINGSLEY NORRIS showed a girl, aged six years, with wasting of the left arm which had progressed during the previous twelve months. A month previous to the onset the child had suffered from an attack of influenza and on a number of occasions from "feverish turns."

Examination showed definite wasting of the deltoid and all the muscles of the arm and forearm, this was most noticeable in the left hand. There was also some impairment of sensation over the ulnar distribution of the forearm. All movements were possible, but weaker than on the right side. Reflexes were obtained on the left arm. Abdominal reflexes were not obtained on the left side. There was no spasticity and no abnormality of gait. The knee jerks were normal. The plantar reflex was flexor in type. The serum had not reacted to the Wasserman test and X-ray examination of the cervical region had disclosed no abnormality.

**Diabetic Coma Treated with "Insulin."**

DR. WALTER SUMMONS showed a boy, aged fourteen years, who had been admitted to hospital on October 1, 1923, in a state of coma. There was a history of polyuria, thirst and loss of weight for one month. On admittance to hospital the patient had been in a state of deep coma with



sunken eyes and cheeks and a pulse rate of one hundred and fifty-two. Respirations had been rapid and shallow.

He had been given thirty units of "Insulin" at 9 p.m., thirty units at 3 a.m. and eighteen units at 9 a.m., as well as glucose solution intra-nasally, orange juice and saline aperients.

The following day his condition had much improved, though his blood sugar was 0.63%. The specific gravity of the urine had been 1030, sugar, diacetic acid and acetone had been present. He had been kept on saline aperients, glucose solution and orange juice with six units of "Insulin" every six hours. This had been gradually lessened, till on the ninth day he had been started on a diet. On the twelfth day he had been put on a basal maintenance diet of carbo-hydrate 24.5 grammes, protein 39 grammes, fat 152 grammes—total calories 1,614.5. The body weight had been forty-nine kilograms (one hundred and eighteen and a half pounds.).

On October 15 the urine had been sugar free. "Insulin" had been continued in less quantity and on January 19 the body weight had been sixty kilograms (one hundred and thirty-two pounds). At the time of demonstration he was doing a full day's work on a farm. The "Insulin" had been stopped and although on a full diet there was no glycosuria.

Dr. Summons said that the interest of this case lay not only in the fact that the patient's life had been saved by the use of "Insulin," but also that as a result of the physiological rest afforded to the pancreas the normal sugar metabolism had apparently been restored and the patient was now apparently well in every way.

#### Congenital Dextro-Cardia.

DR. M. D. SILBERBERG showed a man, aged twenty-six years, with congenital dextro-cardia and a huge heart extending from 7.5 centimetres (three inches) to the left of the sternum to the middle of the right axilla, probably associated adherent pericardium. He had right recurrent laryngeal paralysis with a moderate degree of cyanosis, slight clubbing of fingers and dyspnoea. Electro-cardiograms revealed the presence of a right bundle branch lesion. There was no inversion of "p" wave in Lead I, which is usual with dextro-cardia. There was no transposition of other viscera. A skiagram of the chest was demonstrated.

#### Fractured Pelvis.

MR. BALCOMBE QUICK showed a man, *etatis* thirty years, who three months before in effecting the "splits" had injured his pelvis. His "right hip seemed to go up." He had been in bed one week and had had some scalding on micturition, but no bleeding. For the ensuing two months he had got about until pain in the right hip region had compelled him to lie up.

Examination showed massive thickening of the right ilium and of both pubic rami on the left side. A skiagram showed a fracture of both pubic rami into the obturator foramen with excessive callus formation, also a fracture through the right ilium in the region of the sacro-iliac synchondrosis. The ala of the ilium showed a mottling suggesting possibly an ossifying hæmatoma.

#### General Dislocation of Hip.

MR. FAY MACLURE showed a man, aged twenty-six years, who three months before had been injured in a motor accident. His left knee joint had been completely dislocated. The head of his left femur had been driven through the acetabulum into the pelvis. The man had not walked since.

Examination showed that the knee joint was practically fixed in full extension. There was a very slight degree of movement at the hip joint. The head of the femur could be felt *per rectum* in front of the great sciatic foramen. A skiagram was shown. Mr. MacLure asked for suggestions as to treatment. He thought that it might be advisable to divide the neck of the femur and attempt to establish a false joint. The general opinion favoured a "wait and see" policy.

#### Old Fracture of Astragalus.

MR. ST. CLAIR STEUART showed a man who ten years previously had had a crushing injury to the foot. He complained of pain on walking and had definite *talipes equinus*. Examination showed a false ankylosis of the ankle joint with a bony mass beneath the *tendo Achillis* and on the supero-medial aspect of the *os calcis*. In the radio-gram it appeared to be the body of the astragalus, the head remained in position.

It was suggested that the pain was due to imperfect fixation by fibrous tissue. Treatment directed towards obtaining a bony ankylosis was advised.

#### Lumbar Vertebrae.

MR. TRINCA showed a girl, aged nineteen years, with six lumbar vertebrae, the third and fourth of which showed extensive disease. Mr. Trinca and Dr. Dennis did not regard this as of a tuberculous nature because of the amount of new bone formation seen in the skiagram. Mr. Quick quoted cases in which he had seen new bone formation and later development of cold abscess.

A plaster jacket had relieved the woman's pain.

## Public Health.

### NEW SOUTH WALES.

DR. W. G. ARMSTRONG, THE DIRECTOR-GENERAL OF PUBLIC HEALTH OF NEW SOUTH WALES, has presented his report for the year 1922.

The report is a large document covering one hundred and thirty-nine pages. It opens with a letter of presentation by the Director-General which occupies four pages. The report proper is divided into four sections and each of these is devoted to one of the important branches of the work of the department. The report is full of much valuable and important information. In a short résumé, however, it will not be possible to do more than refer to the principal aspects of the work.

#### Private Hospitals' Act, 1908.

The report on the administration of the *Private Hospitals' Act, 1908*, is furnished by Dr. F. M. Suckling. At the close of the year there were five hundred and fifty-eight licensed hospitals in the State. Two hundred and twelve of these were in the metropolitan area and three hundred and forty-six in country districts. The increase on the number for the previous year was twenty-two. Of the total number of hospitals one hundred and eighty-nine were medical, surgical and lying-in institutions. Thirty-two were medical and surgical only. Three hundred and thirty-seven were lying-in institutions only. Of the total number of hospitals thirty-four had more than twenty available beds, sixty-eight had from eleven to twenty beds and one hundred and fifty-four had beds varying from six to ten in number. Of the approved persons responsible for the nursing and management of patients in these institutions eleven were qualified medical practitioners, four hundred and sixty-six were certificated nurses and eighty-one were untrained nurses. Routine inspection of private hospitals throughout the State was carried on as circumstances permitted. At these inspections it was found that the majority of hospitals were well conducted. The matters most frequently requiring attention were the tendency of licensees to make alterations and additions without first seeking the approval of the Board of Health, the failure of resident managers to sign the register and enter details as fully as possible and the unsatisfactory disposal of sewage waters in unsewered districts. Only two special investigations were undertaken during the year. In one instance a nurse who had failed to comply with regulations dealing with puerperal sepsis anticipated the action of the Board by voluntarily closing her hospital. In the other instance a plea of ignorance of the rules dealing with curettage in the private lying-in homes

was accepted and subsequent re-inspection showed that the Department had been justified in this course of action.

#### Notifiable Infective Diseases.

During the year 1922, 6,040 cases of infective disease were notified; the deaths numbered 353. During 1921 the cases and deaths numbered respectively 9,079 and 494. During 1922 the numbers of cases and of deaths from infective disease were as follows: Typhoid fever, 706 and 99; scarlet fever, 1,153 and 11; diphtheria or membranous croup, 4,094 and 207; bubonic plague, 33 and 9; infantile paralysis (acute anterior polio-myelitis), 33 and 5; epidemic cerebro-spinal fever (meningococcal meningitis), 21 and 22 (the last figure is probably a typographical error).

In regard to typhoid fever it is pointed out that Broken Hill is the only town in which the state of affairs in regard to typhoid fever is really unsatisfactory. This town furnished one-sixth of the number of infections of the whole State. On more than one occasion the Department has offered general free inoculation against the disease to the inhabitants of Broken Hill, but advantage has not been taken of the offer. While this offer is most praiseworthy, it is disconcerting to read in the report of the Medical Officer of Health for Broken Hill, Dr. J. F. Bartley, that out of 7,500 sanitary services 850 are still under the old nightcart system. Dr. Bartley characterizes it as illegal and disgusting. He states that the matter of expense in getting iron for the manufacture of pans has always been put forward as an excuse for the perpetuation of the old system. Another factor which should be mentioned, is the fact recorded by Dr. Bartley that the strikes of sanitary employees are followed by increase in the incidence of typhoid fever and intestinal troubles in children and adults. Surely it is time that some power were given to the Department to enforce sanitary reforms when its advice is not accepted.

In regard to diphtheria Dr. J. S. Purdy in his portion of the report states: "Although the general introduction of the Schick test and treatment would undoubtedly lessen the incidence of diphtheria, the best prospects of reduction appears to me to be to secure closer cooperation of an extended school nursing supervision with that of the health inspectors of the local and central health authority. The medical profession must necessarily cooperate by more prompt and efficient notification and routine forwarding of swabs for examination with a more ready resource to antitoxin."

Pulmonary tuberculosis is notifiable in the metropolitan and Hunter River combined sanitary districts, in the Katoomba Municipality and Blue Mountain Shire and in the Blackheath Municipality. The number of cases notified during the year was 1,045 and the number of deaths was 517. These numbers were smaller than those of the preceding year (1921), when they were respectively 1,240 and 791.

#### Venereal Disease.

There was a distinct falling off in the number of venereal infections treated in the institutions under departmental control during the year. The number of gonorrhoeal infections notified during the year was 4,516, of these 4,094 occurred in males. The notifications of cases of syphilis numbered 1,270 and of these 980 occurred in males. Soft chancre was notified on 115 and gleet on 334 occasions. The patients reported for failure to continue treatment numbered 1,992. Notices calling upon such patients to resume treatment were returned unclaimed on 997 occasions, 628 patients were induced to resume treatment after receipt of notice and 367 cases were not finalized at the end of the year.

Dr. W. G. Armstrong, the Commissioner appointed under the *Venereal Diseases Act 1918*, refers to the need for increasing the number of public clinics for the treatment of venereal disease. He emphasizes the necessity for establishment of such a clinic at Newcastle. He claims that good results have followed the education of the public in regard to the serious nature of venereal disease. There is in his opinion probably no direction in which public money could be more wisely expended for the furtherance of public health than in the establishment and suitable upkeep of venereal disease clinics.

## Correspondence.

WILLIAM MACEWEN.

SIR: As one who had the privilege to serve the late Sir William Macewen as student, as house surgeon and as assistant, I would like to say a few words in appreciation of his worth.

One word describes everything he did—thorough. His book—"The Septic Diseases of the Brain and Spinal Cord," although written so long ago is still a classic and "The Growth of Bone" is a monument to clear thinking and preciseness.

His pioneer work in surgery of brain and bone is so well known as not to call for further comment and to enumerate all the advances for which he was responsible in the different departments of surgery would be difficult.

As an operator he was deliberate and fearless but it was the courage begot of thorough preparation. Every faculty and device was brought into play to elucidate a difficult case and no operation was undertaken without the most careful differential diagnosis. His technique was meticulous and he continued to use the carbolic method when others had given it up. For two years I saw every operation he performed and although he was often confronted with difficulties I never saw him at a loss. In the realm of anaesthetics he had a preference for chloroform, but his students were taught how to administer it properly.

His record as a scientist is very high indeed and few realize how after dinner he used to revisit the University and stay in his laboratory until the early hours of the morning.

An incident in this connexion gives an index of the man. Lady Macewen on my being appointed a University assistant expressed the hope that I would see that Sir William returned home at a respectable hour of night. But the words were overheard and Sir William with a twinkle replied: "X. is my assistant; nothing more." He always held the reins.

But those who studied under him, will remember him best as the clinician—the teacher sitting on the white stool in the corridor. We can recall the erect posture, the sudden fall of the eye-glasses, the sharp flick of the papers in his hand, the "Ah, but" when we strayed in our argument from the narrow path of reason. It was not mere surgery we learned there, but anatomy, physiology and pathology too and best of all precision and clear thinking. He was the most mentally alert man we have ever met and the kindest when we were real triers. To the nurses in his wards he was father and friend and no one has ever done more for the nursing profession as a whole.

Some who did not know him well, have thought him hard, but a knowledge of the man revealed him quite otherwise. His method was not to spoon-feed but to help us to help ourselves, to teach us to be self-reliant and to stand on our own legs. The sycophant he abhorred, infinitely preferring one who might differ from him provided he could give a reason for his belief. All he demanded was whole-hearted effort and loyalty.

The Glasgow School of Medicine never stood higher than it does today and it owes its present position more to Macewen than to any one man.

In politics he was a keen conservative, but he was more interested I think in the wider field of international politics.

Outside of his work his chief delights I should say were grand opera and agriculture. Practically every weekend in the years before the war he spent at his estate in Bute, where he had an up-to-date farm attached to his country home.

His untiring work for the nation during the war—he was one of the special consultants appointed by the Commons—left its mark and was noted by all, but in this as in everything he never spared himself.

Like all great men, however, he was greatest in his own home as those who were privileged to be his guest can testify. It is here that the loss will be most keenly felt, but the University of Glasgow has lost a professor



whose shoes it will be unusually hard to fill and the profession at large a perfect gentleman, a brilliant surgeon and a painstaking investigator into the deep secrets of science.

Yours, etc.,

C. DUGUID.

192, North Terrace, Adelaide,  
March 29, 1924.

#### VENEREAL DISEASE.

SIR: Dr. Cooper Booth's letter in your journal of last week touches on a subject which, when the *Venerereal Diseases Act* was being drafted before the Commission, was I feel sure never thought of. I, too, have had the same experience as Dr. Cooper Booth with patients attending my syphilis clinic at the Sydney Hospital. One man now under treatment has his undoubted third attack of primary syphilis. Men have also come to the clinic in evening dress and demanded free treatment. Others have during their treatment for syphilis developed gonorrhoea. Whether it is on account of free treatment that our numbers are increasing I cannot accurately state, but the numbers are increasing and I feel like Dr. Cooper Booth that this "indiscriminate charity" is one of the methods that help to swell the clinics.

Yours, etc.,

GEORGE R. HAMILTON.

157, Macquarie Street, Sydney,  
April 8, 1924.

#### ADENOMA SEBACEUM.

SIR: Dr. Hamilton's report in the issue of April 5, 1924, on the case of *adenoma sebaceum* is very interesting. If Dr. Hamilton keeps in touch with this patient and is fortunate enough to secure a *post mortem* examination of her brain and kidneys he will find *tuberosc sclerosis* or hypertrophic sclerosis of the cortex of the brain, with a candle-guttering appearance of the lateral ventricles. He will probably also find small growths in the cortex of the kidneys. The last of a series of eight cases died recently at the Kew Idiot Cottages and I have just finished a description of their brief existence in Kew and their *post mortem* appearances. In 1914 at the Australasian Medical Congress, New Zealand, my contribution was upon this same subject. In the "Transactions" of that Congress, he will find photographs of the conditions I mention. The combination of the *adenoma sebaceum*, the mental backwardness and the fits, has been named by Sherlock, *epiloia*. Unfortunately the family histories in the cases at Kew were incomplete, but where we could get information it supports the inheritance of mental deficiency mentioned by Dr. Hamilton.

Yours, etc.,

W. A. T. LIND.

Victorian Lunacy Department, Kew,  
April 7, 1924.

#### THE MEDICAL BENEVOLENT FUND OF NEW SOUTH WALES.

SIR: As the general body of the profession appear to know very little about the Medical Benevolent Fund of New South Wales, a little additional information will be useful to those members of the Branch who were not present at the Annual Meeting. The late Sir Herbert Maitland had been secretary for about twenty-five years and took a very special interest in its affairs, but did not issue any regular appeal for funds. He only sent out an appeal when the funds got low. On Sir Herbert's death taking place suddenly in June, 1923, Mr. A. W. Green came to me and suggested that I should undertake the office of secretary. This I readily agreed to do. Dr. R. L. Faithfull, having resigned the office of treasurer, Dr. E. S. Littlejohn was appointed in his stead. Mr. A. W. Green has very kindly consented to act as assistant secretary,

in an honorary capacity. Our expenses last year, apart from money voted to deserving cases, amounted to thirteen shillings and seven pence. Last year we voted away £109 10s. 7d. to three beneficiaries, all widows of medical men. One, an old lady of seventy-five, without any means, was voted £1 a week; £50 was voted to the widow of a medical man who had died after a long illness in debt. In each of these cases more would have been voted, had the funds permitted. I have long felt that some organization was necessary to provide adequate assistance to the families of medical men left unprovided for and that the painful appeals every now and then circulated should not be necessary.

The annual subscription is ten shillings and six pence, but some members have made donations. The South Sydney Medical Association has made us a donation of £20. Might I suggest that the other medical associations support us in a similar fashion?

Yours, etc.,

J. M. GILL,

Honorary Secretary, N.S.W. Medical

Benevolent Fund.

Sydney, April 8, 1924.

#### Obituary.

##### ALFRED WILLIAM RINDER.

MELBOURNE graduates of the early eighties will have heard with unfeigned regret of the death of Dr. Alfred William Rinder at Tarnagulla, Victoria, on March 18, 1924, after a brief illness.

Alfred William Rinder was born at Wedderburn, Victoria, in 1864. He was a son of the late Samuel Rinder, a man of great literary abilities and this fondness for literary pursuits was inherited by his son. Alfred William Rinder was educated at South Melbourne College. From there he went to Melbourne University as an undergraduate in medicine. He spent some years at a medical student in Melbourne and finally proceeded to Edinburgh where he obtained the triple qualification in 1886. On his return to Victoria he practised in North Carlton, Balacava and Wedderburn. He did not take professional life very seriously and when circumstances permitted him to do so he retired from active practise at a comparatively early age.

It is for his prominence in the domain of social life that he will be so kindly remembered by his medical contemporaries as well as by a very wide circle of non-medical friends. When he first became a medical student at Melbourne organized social life in the Medical School was at a very low ebb. The Medical Students' Society had just come into being and through his exertions and those of others it made rapid progress. He was the first "poet laureate" of the school and it is to him that it owes the "Medical Students' Anthem." Subsequently after many emendations this became metamorphosed into the 'Varsity Anthem. *The Speculum*, the journal of the Melbourne Students' Society, first appeared in the year 1884 and he, with Dr. Carl Dyring, Dr. G. T. Howard and the late H. R. Salmon, constituted the first editorial committee. His principal contributions were inimitable witty parodies of popular songs into which plenty of local colour was introduced. He seemed to be able to parody anything at the shortest possible notice. Another of his pioneering efforts was the introduction of smoke nights for students. The first was held at Gunsler's Café (now "The Australia") and was a very modest but successful affair. A more spectacular effort of his was the first students' theatre night held in what is now His Majesty's Theatre, when Genevieve Ward played in "Macbeth." The students conducted an *extempore* concert in the intervals. It was a pronounced success and Miss Ward was delighted with the conduct of the students.

His extra medical activities in the latter half of his life received much more of his attention than his professional work; they were numerous and varied. He took a keen interest in politics and was a strong supporter

of federation. He was frequently associated on the platform with late Alfred Deakin and twice he unsuccessfully contested Federal seats. He went so far into journalism as to be for a short time the proprietor of a country newspaper. He was an occasional contributor to metropolitan journals. To his brethren of the Yorick Club of which he was sometime secretary, his never ending stream of droll, kindly wit and his insouciance of manner were a ceaseless source of delight. It has been well said of him that, as no effort was needed, he sauntered through life in a very easy-going way, he never wounded sensitive feelings and he caused the gravest to smile. Had serious effort been called for, he would have undoubtedly made his mark in the literary world.

#### VINCENZO MARANO.

It is with regret that we have to announce the death of Dr. Vincenzo Marano which occurred at Sydney on April 6, 1924.

### Naval and Military.

#### APPOINTMENTS.

THE undermentioned appointments have been promulgated in *Commonwealth of Australia Gazette*, Nos. 21 and 22, of March 27 and April 3, 1924:

##### Citizen Naval Forces of the Commonwealth.

##### Royal Australian Naval Reserve.

**Promotion**—SURGEON LIEUTENANT LEONARD JOHN DUNSTONE, M.B., Ch.B., is promoted to the rank of Surgeon Lieutenant-Commander, dated 1st February, 1924 (ex. Min. No. 47).

##### Australian Military Forces.

##### SECOND MILITARY DISTRICT.

##### Australian Army Medical Corps.

LIEUTENANT-COLONEL C. H. E. LAWES is appointed to command the 14th Field Ambulance, 5th January, 1924. The resignation of LIEUTENANT K. D. HUDSON of his provisional appointment is accepted, 31st December, 1923.

##### FOURTH MILITARY DISTRICT.

##### Australian Army Medical Corps Reserve.

HONORARY CAPTAIN C. RICHARDS is transferred from the Australian Army Medical Corps Reserve, 5th Military District, 20th March, 1924.

##### FIFTH MILITARY DISTRICT.

##### Australian Army Medical Corps Reserve.

HONORARY CAPTAIN C. RICHARDS is transferred to the Australian Army Medical Corps Reserve, 4th Military District, 20th March, 1924.

### Medical Appointments.

DR. J. W. K. BRUCE (B.M.A.) has been appointed Medical Officer in the Medical Branch of the Department of Education of New South Wales.

### Medical Appointments Vacant, etc..

FOR announcements of medical appointments vacant, assistants, *locum tenentes* sought, etc., see "Advertiser," page xviii.

MELBOURNE HOSPITAL: Medical Vacancies.

UNIVERSITY OF MELBOURNE: Demonstrator for the Bacteriology Department.

### Medical Appointments: Important Notice.

MEDICAL practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429, Strand, London, W.C..

BRANCH.	APPOINTMENTS.
NEW SOUTH WALES: Honorary Secretary, 30 - 34, Elizabeth Street, Sydney	Australian Natives' Association Ashfield and District Friendly Societies' Dispensary Balmain United Friendly Society's Dis- pensary Friendly Society Lodges at Casino Leichhardt and Petersham Dispensary Manchester Unity Oddfellows' Medical Institute, Elizabeth Street, Sydney Marrickville United Friendly Societies' Dispensary North Sydney United Friendly Societies People's Prudential Benefit Society Phoenix Mutual Provident Society
VICTORIA: Honorary Secretary, Medical Society Hall, East Melbourne	All Institutes or Medical Dispensaries Australian Prudential Association Pro- prietary, Limited Mutual National Provident Club National Provident Association
QUEENSLAND: Hon- orary Secretary, B. M. A. Building, Adelaide Street, Brisbane	Brisbane United Friendly Society Insti- tute Stannary Hills Hospital
SOUTH AUSTRALIA: Honorary Secretary, 12, North Terrace, Adelaide	Contract Practice Appointments at Ren- mark Contract Practice Appointments in South Australia
WESTERN AUSTRALIA: Honorary Secretary, Saint George's Terrace, Perth	All Contract Practice Appointments in Western Australia
NEW ZEALAND (WELLINGTON DIVI- SION): Honorary Secretary, Wellin- gton	Friendly Society Lodges, Wellington, New Zealand

### Diary for the Month.

APR. 24.—South Australian Branch, B.M.A.: Branch.  
APR. 25.—Queensland Branch, B.M.A.: Council.  
MAY 2.—Queensland Branch, B.M.A.: Branch.  
MAY 7.—Victorian Branch, B.M.A.: Branch.  
MAY 8.—Brisbane Hospital for Sick Children: Clinical Meeting.  
MAY 9.—Queensland Branch, B.M.A.: Council.  
MAY 9.—South Australian Branch, B.M.A.: Council.  
MAY 14.—Tasmanian Branch, B.M.A.: Branch.  
MAY 14.—Melbourne Paediatric Society.  
MAY 21.—Victorian Branch, B.M.A.: Council; Election of  
Representative on Representative Body.  
MAY 21.—Western Australian Branch, B.M.A.: Branch.  
MAY 23.—Queensland Branch, B.M.A.: Council.  
MAY 29.—South Australian Branch, B.M.A.: Listerian Oration.  
JUNE 4.—Victorian Branch, B.M.A.: Branch.  
JUNE 6.—Queensland Branch, B.M.A.: Branch.

### Editorial Notices.

MANUSCRIPTS forwarded to the office of this journal cannot under any circumstances be returned. Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary be stated. All communications should be addressed to "The Editor," THE MEDICAL JOURNAL OF AUSTRALIA, B.M.A. Building, 30-34, Elizabeth Street, Sydney. (Telephone: B. 4635.)

SUBSCRIPTION RATES.—Medical students and others not receiving THE MEDICAL JOURNAL OF AUSTRALIA in virtue of membership of the Branches of the British Medical Association in the Commonwealth can become subscribers to the journal by applying to the Manager or through the usual agents and book-sellers. Subscriptions can commence at the beginning of any quarter and are renewable on December 31. The rates are £2 for Australia and £2 5s. abroad per annum payable in advance.